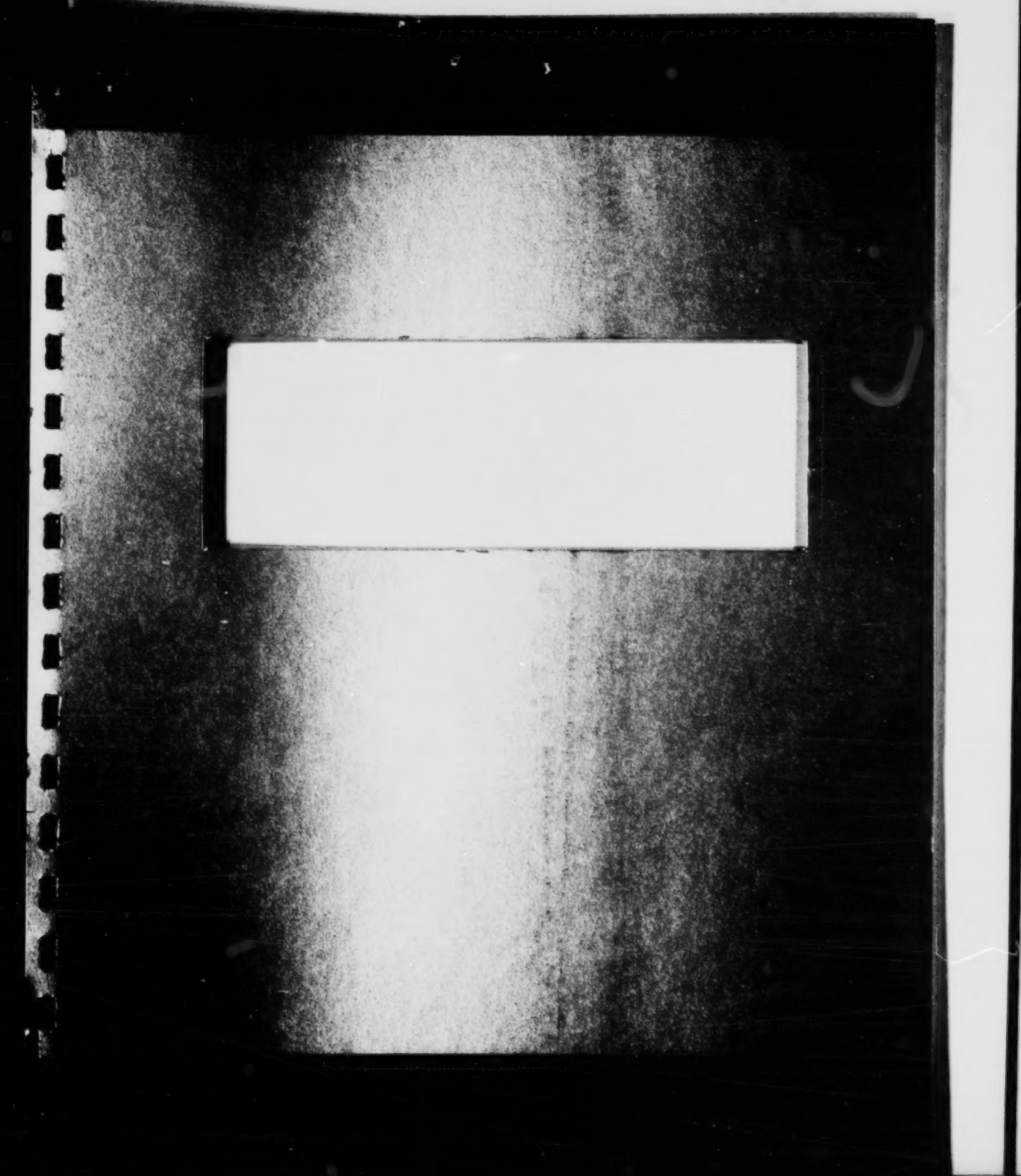

SCIENTIFIC ACTIVITIES OF THE GOVERNMENT OF SASKATCHEWAN

1984-85 Survey Results

A report prepared by:

The Science, Technology and
Capital Stock Division,
STATISTICS CANADA
January, 1986

FOREWORD

This report presents a summary of the results of the eleventh survey of scientific activities of the government of Saskatchewan. The survey was conducted the week of May 27, 1985 by Bert Plaus of Statistics Canada, with the co-operation and assistance of Ms. Deborah DesRivières, of the Department of Science and Technology.

The first surveys of government scientific activities at the provincial level were conducted in the provinces of Ontario, Alberta and Nova Scotia in 1974; Saskatchewan was included in 1975, British Columbia in 1977 New Brunswick in 1984, and Manitoba in 1985. Reports for other provinces, similar to this one, are available on request from the representatives identified at the end of this report.

Surveys of the scientific activities of provincial governments serve several purposes. They provide an essential data base for analysis and the formulation of provincial science policy. They also provide data for the development of a national aggregate R&D series. National aggregates are published by Statistics Canada in many of the publications listed at the end of the report. The national aggregates are also needed to complete the international questionnaires for the Organization for Economic Co-operation and Development (OECD) and the United Nations Education, Science and Culture Organization (UNESCO).

The 1985 survey of Saskatchewan provincial government activities has produced reasonable indicators of scientific involvement at the department or agency level. This success is largely due to the goodwill and efforts of officials of the responding departments. The assistance provided by staff of the Department of Science and Technology is most gratefully acknowledged and appreciated by Statistics Canada.

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Historical Series 1978-79 to 1985-86:						
Total Expenditures:						
by Activity	1	16	22	56	43	86
by Department or Agency	2	17	23	57	44	87
by Performer	3	19	24	58	45	88
Current Expenditures on R&D:						
by Department or Agency	4	20	25	59	46	89
by Performer	5	21	26	60	47	90
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	All Sciences		Natural Sciences		Social Sciences	
	Table	Page	Table	Page	Table	Page
Expenditures in 1984-85 Fiscal Year:						
Total Expenditures:						
by Sources of Funds	7	23	28	62	49	92
by Activity and Performer	8	25	29	63	50	93
by Department or Agency and Performer	9	26	30	65	51	95
Current Expenditures by Department or Agency and Activity	10	28	31	66	52	96
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Detail of Intramural Expenditures	12	31	33	68	54	98
Departmental Personnel Engaged in Scientific Activities, by Department or Agency	13	33	34	69	55	99
Objectives of Expenditures:						
by Department or Agency	14	35	35	71	56	101
by Activity	15	41	36	75	57	104
Estimates for 1985-86 Fiscal Year:						
Total Expenditures:						
by Activity and Performer	16	43	37	76	58	105
by Department or Agency and Performer	17	44	38	77	59	106
Current Expenditures by Department or Agency and Activity	18	not available	39	78	60	not available
Current Expenditures on R&D by Department or Agency and Performer	19	46	40	79	61	107
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The following symbols are used in this report:

- nil or zero

... figures are not available or not applicable

(r) revised figures

(e) estimated figures

HIGHLIGHTS

Approximately 1.4% (an increase from 1.3% in 1983-84) of the estimated 1984-85 budgetary expenditures of the government of Saskatchewan was spent on scientific activities. While total government expenditures for 1985-86 are estimated to increase by 6%, scientific expenditures should rise by 21%.

TEXT TABLE I. Scientific Activities of the Government of Saskatchewan

Department or Agency	1984-85 Expenditures	1984-85 Scientific expenditures	1984-85 %	1985-86 Estimated expenditures	1985-86 Scientific expenditures	1985-86 %
	($ millions)			($ millions)		
Agriculture	112.3	6.6	5.9	115.5	10.9	9.4
Energy & Mines	38.6	4.3	11.0	38.6	6.0	15.5
Health	1,025.7	9.3	0.9	1,085.8	9.0	0.8
Highways & Transportation	222.4	1.6	0.7	206.6	2.1	1.0
Parks & Renewable Resources	62.2	1.4	2.3	60.1	1.1	1.8
Social Services	304.5	2.9	1.0	334.6	3.5	1.0
Sub Total	1,765.7	26.1	1.5	1,841.2	32.6	1.8
Other (1).....	1,513.2	20.0	1.3	1,625.5	23.2	1.4
**Total ..... **	**3,278.9**	**46.1**	**1.4**	**3,466.7**	**55.8**	**1.6**

(1) Includes Vote 35 (Grant to the Saskatchewan Research Council).

TEXT TABLE II. Total Expenditures on Scientific Activities, by Science Type 1978-79 to 1985-86

Science type	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(r)	1985-86(e)
	($'000)							
Natural (1)..	14,972	19,146	17,456	19,298	24,333	28,899	29,362	38,852
Social	6,001	6,327	8,954	8,649	8,453	11,549	16,784	16,961
Total	**20,973**	**25,473**	**26,410**	**27,947**	**32,786**	**40,448**	**46,146**	**55,813**

(1) Includes Vote 35 (Grant to the Saskatchewan Research Council).

Of the total 1984-85 science expenditures, 64% ($29.4 million) are for natural science activities. Research and development (R&D) account for $17.6 million (60%) of this amount. The remaining $11.8 million is spent on related scientific activities(RSA). Major support of research and development comes from the departments of Agriculture, Energy & Mines and Health as well as the Saskatchewan Research Council. The special services and studies activity is the major related scientific activity, supported mainly by the departments of Health and Energy & Mines.

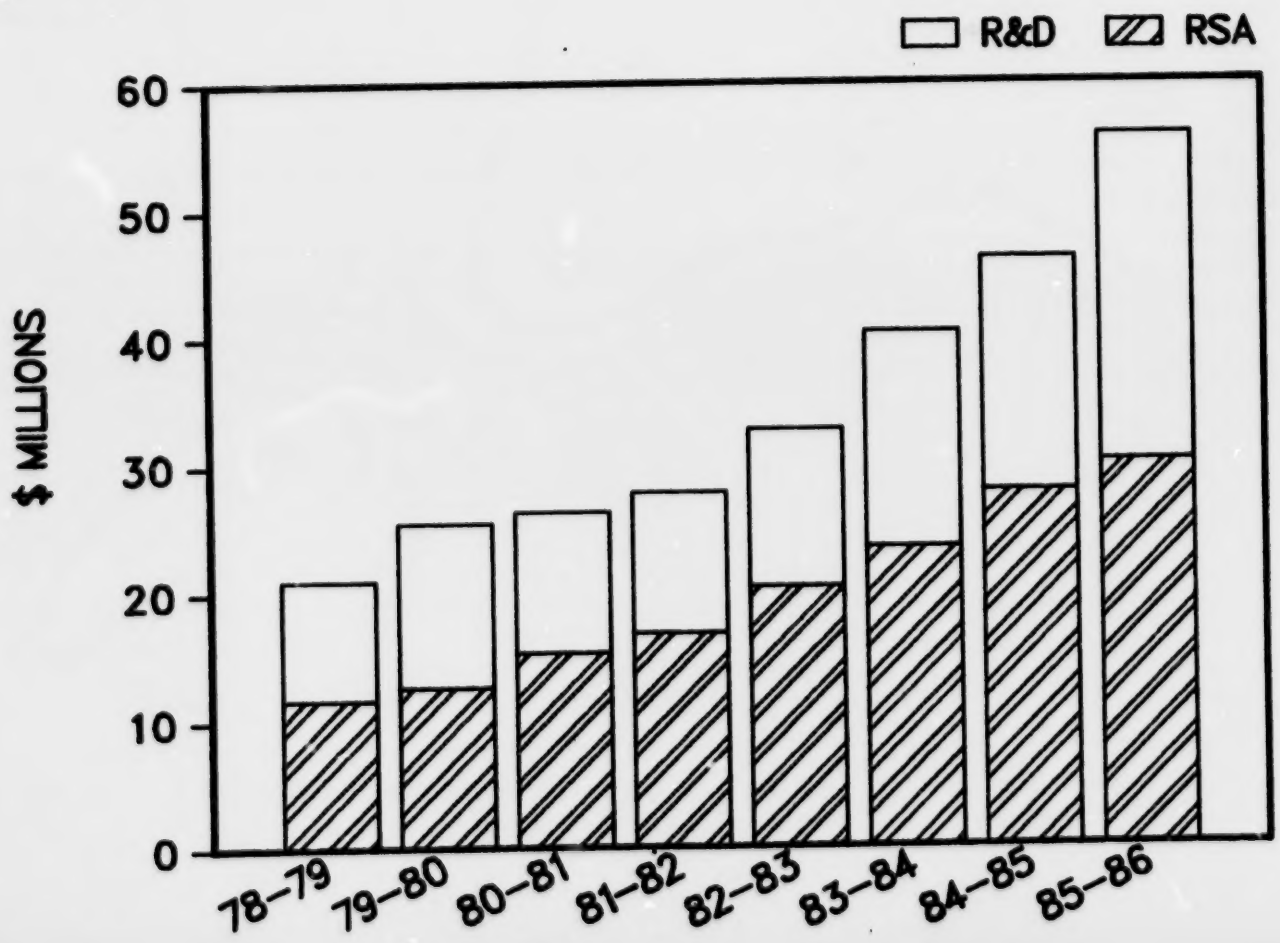
Social science activities account for 36% ($16.8 million) of the total 1984-85 Saskatchewan government science expenditure. Ninety six percent of this is spent on related scientific activities. The departments of Justice, Social Services and Health are the major supporters of social science activities.

Note: In this report the scientific expenditures of the Saskatchewan Research Council reflect only the yearly grant from the Saskatchewan Government (Vote 35). Additional information on the SRC is available in Science Statistics, Catalogue No. 88-001, Vol. 9, No. 11.

Figure 1.

Government of Saskatchewan

Total Expenditures on Scientific Activities, by Activity, 1978–79 to 1985–86



Text Table III. Total Expenditures on Scientific Activities, by Sector of Performance, 1984-85

Activity	Intramural	Industry	University	Hospitals & health organizations	Saskatchewan Research Council (1)	Other	Total
	($'000)						
R & D	3,260	3,604	5,796	886	4,315	407	18,268
RSA	20,839	4,062	1,236	-	145	1,596	27,878
**Total	**24,099**	**7,666**	**7,032**	**886**	**4,460**	**2,003**	**46,146**

(1) Includes only Provincial Government payments to the Saskatchewan Research Council (SRC).
The provincial government itself performed 51% of the scientific activities in 1984-85. Most of the RSA funded by the provincial government is performed in-house. However, only 18% of the R&D is performed by the government itself. This year the University sector is the largest extramural performer (17%) followed closely by the Industry sector (16%) and the Saskatchewan Research Council (10%).

Text Table IV. Total Expenditures on Scientific Activities, by Source of Funds, 1984-85

Department or Agency	Departmental budget	Transfers from other departments	Federal Government	Trust fund	Other sources	Total
	($'000)					
Agriculture	6,168	-	-	-	445	6,613
Energy & Mines ...	117	-	1,858	-	2,299	4,274
Health	8,109	-	325	854	20	9,308
Other	19,973(2)	57	250	-	1,565	21,845(2)
**Total	**38,473**	**57**	**2,433**	**854**	**4,329**	**46,146**

(2) Includes Vote 35 (Grant to the SRC).
The primary source of funds is the provincial departmental budgets, accounting for 83% of total science expenditure.

Text Table V. Departmental Personnel Engaged in Intramural Science Activities, by Science Type and Category, 1984-85

Science type and activity	Scientific & professional		Technical		Other		Total	
	Number	%	Number	%	Number	%	Number	%
Natural Sciences:								
R&D	37	45	39	47	7	8	83	100
RSA	61	27	127	56	37	17	225	100
Total	98	32	166	54	44	14	308	100
Social Sciences:								
R&D	5	56	3	33	1	11	9	100
RSA	154	64	12	5	74	31	240	100
Total	159	64	15	6	75	30	249	100
**Total ..... **	**257**	**46**	**181**	**33**	**119**	**21**	**557**	**100**

Of the total Saskatchewan government employees, 557 person-years (4.0%) are devoted to science activities. The scientific and professional category accounts for 46%, technical personnel constitute 33% and other support staff the remaining 21%.

Text Table VI. Objective of Total Science Expenditures

Objective	1984-85		1985-86	
	($'000)	%	($'000)	%
Advancement of science	1,421	3.1	2,043	3.7
Energy & fuels:				
Fossil fuels	3,728	8.1	5,546	9.9
Other	884	1.9	257	0.5
Environmental issues	2,959	6.4	2,987	5.3
Health	9,794	21.2	9,410	16.9
Industrial & economic development:				
Agriculture	7,365	16.0	11,780	21.1
Manufacturing	2,071	4.5	5,823	10.4
Minerals	1,286	2.8	1,267	2.3
Other	2,373	5.1	2,463	4.4
Social development & related areas	9,729	21.0	10,585	19.0
Transportation	1,919	4.2	2,447	4.4
All other	2,617	5.7	1,205	2.2
Total	**46,146**	**100.0**	**55,813**	**100.0**

Almost one half of the money spent on natural science activities in 1984-85 was for Agriculture and Health. The major objective in the social sciences is Social development & related areas. Overall, $9.8 million was directed to Health, $7.4 million to Agriculture, $4.6 million to Energy & fuels, $5.7 million to Industrial & economic development (excluding Agriculture), $9.7 million to Social development & related areas and $8.9 to all other areas.

ALL SCIENCES

Government of Saskatchewan

TABLE 1. Total Expenditures in All Sciences, by Activity, 1978-79 to 1985-86

Activity	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85(r)	1985-86(e)
	($'000)							
Research & development:								
Current expenditures:								
In-house	2,038	2,478	2,626	2,633	2,816	3,068	2,658	2,261
Contracts	488	466	362	354	766	3,795	4,265	11,009
Grants	6,827	9,819	7,838	7,919	8,637	9,853	11,086	11,920
Research fellowships	15	34	38	20	71	122	92	281
Sub-total	9,368	12,797	10,864	10,926	12,290	16,838	18,101	25,471
Capital expenditures	48	97	253	203	99	82	167	108
Related scientific activities:								
Current expenditures	11,085	12,145	14,975	16,640	20,157	23,371	27,073	30,017
Capital expenditures	472	434	318	178	240	157	805	217
Total	**20,973**	**25,473**	**26,410**	**27,947**	**32,786**	**40,448**	**46,146**	**55,813**

Government of Saskatchewan

TABLE 2. Total Expenditures in All Sciences by Department or Agency, 1978-79 to 1985-86

Department or Agency	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(r)	1985-86(e)
	($'000)							
Advanced Education & Manpower	425	432	459	534	560	170	1,328	1,999
Agriculture	2,993	2,329	2,512	4,768	7,566	8,607	6,613	10,911
Archives Board	487	521	722	772	872	1,002	920	1,054
Assessment Authority	...	...	...	...	...	...	53	55
Cancer Foundation	...	...	...	...	241	282	407	350
Consumer and Commercial Affairs	10	6	2	...	75	75	295	295
Co-operation & Co-op Dev't ..	323	443	529	168	...	219	224	221
Culture & Recreation	487	550	624	860	304	358	464	487
Economic Dev't & Trade	...	...	...	...	...	556	647	1,007
Education	101	61	177	149	197	158	200	320
Employment Dev't Agency	...	...	...	...	...	...	...	350
Energy & Mines	5,127	8,946	5,052	2,820	3,623	5,183	4,274	5,996
Environment	77	78	517	737	991	687	755	790
Executive Council	202	213	121	129	201	131	386	471
Finance	41	42	...	...	...	...	1,052	1,086
Government Insurance Corp ...	35	55	57	62	...	...	...	...
Health	4,161	4,461	6,446	6,608	6,686	9,044	9,308	8,981
Highway Traffic Board	120	50	178	97	127	90	84	83
Highways & Transportation ...	909	867	996	1,056	1,443	1,415	1,628	2,153
Indian & Native Affairs Sec .	...	...	...	...	...	188	205	182
Industry & Commerce	424	446	625	522	758	...	...	...

Government of Saskatchewan - Concluded

TABLE 2. Total Expenditures in All Sciences by Department or Agency, 1978-79 to 1985-86

Department or Agency	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(r)	1985-86(e)
	($'000)							
Justice	...	...	...	...	...	1,295	1,495	1,500
Labour	458	458	458	655	694	675	212	142
Municipal Affairs	260	...	...	...	...	...	...	...
Northern Saskatchewan	282	303	354	454	...	...	...	...
Parks & Renewable Resources	...	...	...	...	2,208	2,236	1,409	1,127
Public Service Commission	...	...	...	...	...	202	202	216
Revenue & Financial Services	...	...	...	...	...	110	102	146
Rural Development	...	...	146	130	166	205	264	276
Saskatchewan Housing Corp	205	198	356	371	...	...	318	318
Saskatchewan Library	...	...	...	...	...	...	30	10
Science & Technology	...	...	...	...	...	652	2,477	6,038
Social Services	794	863	1,202	1,421	1,575	1,824	2,892	3,539
Supply & Services	...	...	...	...	...	860	1,954	537
Tourism & Renewable Resources	233	972	1,342	1,782	...	...	...	...
Tourism & Small Business	...	...	...	...	186	90	264	458
Tptn Agency of Saskatchewan	301	311	60	26	...	...	...	...
Urban Affairs	...	269	747	761	794	460	785	539
Water Corporation	...	...	...	...	...	...	755	850
Women's Secretariat	...	...	...	...	...	...	38	45
Vote 35	2,518	2,599	2,728	3,065	3,519	3,876	4,106	4,081
Total	**20,973**	**25,473**	**26,410**	**27,947**	**32,786**	**40,448**	**46,146**	**55,813**

Government of Saskatchewan

TABLE 3. Total Expenditures in All Sciences, by Performer, 1978-79 to 1985-86

Performer	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(r)	1985-86(e)
	($'000)							
Intramural	12,340	13,690	16,062	16,068	19,198	22,907	24,099	23,825
Industry	2,948	6,531	4,180	2,294	3,358	5,501	7,666	12,877
Universities	2,261	2,082	1,820	4,214	5,158	6,408	7,032	8,770
Hospitals & health organizations	250	250	1,150	1,057	140	203	886	348
Saskatchewan Research Council (1)	2,898	2,934	2,830	3,786	3,869	4,227	4,460	7,507
Other	276	213	368	528	1,063	1,202	2,003	2,486
Total	**20,973**	**25,473**	**26,410**	**27,947**	**32,786**	**40,448**	**46,146**	**55,813**

(1) Includes only Provincial Government payments to the SRC.

Government of Saskatchewan

TABLE 4. Current Expenditures on R&D in All Sciences, by Department or Agency, 1978-79 to 1985-86

Department or Agency	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(r)	1985-86(e)
	($'000)							
Advanced Education & Manpower	37	28	32	20	21	...	...	...
Agriculture	2,470	1,572	2,075	4,072	4,922	4,654	4,989	9,262
Archives Board	101	107	32	...	...	...	...	...
Cancer Foundation	...	...	...	...	182	259	355	300
Consumer & Commercial Affairs	...	...	...	...	12	12	...	...
Co-operation & Co-op Dev't	...	60	104	...	...	...	...	...
Culture & Recreation	125	131	135	160	65	18	36	36
Education	...	...	...	...	...	...	...	...
Energy & Mines	2,530	6,067	1,994	78	522	3,320	3,378	4,943
Environment	...	...	...	...	...	50	55	60
Executive Council	64	67	61	65	134	65	181	186
Government Insurance Corp	32	53	54	57	...	...	...	...
Health	946	1,299	2,493	2,220	1,691	2,543	2,846	2,543
Highway Traffic Board	34	15	50	...	...	...	...	...
Highways & Transportation	181	219	147	197	250	257	225	578
Industry & Commerce	44	133	382	99	344	...	...	...
Northern Saskatchewan	82	88	4	...	...	...	...	...
Parks & Renewable Resources	...	...	...	...	536	1,021	621	546
Saskatchewan Housing Corp	...	...	...	44	...	...	...	...
Science & Technology	...	...	...	...	...	450	986	2,588
Social Services	12	26	33	...	92	133	141	141
Supply & Services	...	...	...	...	...	170	102	107
Tourism & Renewable Resources	175	316	535	848	...	...	...	...
Tourism & Small Business	...	...	...	...	...	10	...	...
Tptn Agency of Saskatchewan	17	17	5	1	...	...	...	...
Water Corporation	...	...	...	...	...	...	80	100
Vote 35	2,518	2,599	2,728	3,065	3,519	3,876	4,106	4,081
Total	**9,368**	**12,797**	**10,864**	**10,926**	**12,290**	**16,838**	**18,101**	**25,471**

Government of Saskatchewan

TABLE 5. Current Expenditures on R&D in All Sciences, by Performer, 1978-79 to 1985-86

Performer	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(r)	1985-86(e)
	($'000)							
Intramural	2,049	2,550	2,659	2,633	2,828	3,563	3,093	3,454
Industry	2,098	5,824	2,494	454	846	3,379	3,604	6,412
Universities	2,060	1,354	1,696	3,705	4,683	5,570	5,796	7,145
Hospitals & health organizations	250	250	1,150	796	119	189	886	348
Saskatchewan Research Council (1)	2,661	2,685	2,728	3,218	3,555	3,908	4,315	7,433
Other	250	134	137	120	259	229	407	679
**Total	**9,368**	**12,797**	**10,864**	**10,926**	**12,290**	**16,838**	**18,101**	**25,471**

(1) Includes only Provincial Government payments to the SRC.

Government of Saskatchewan

TABLE 6. Departmental Personnel Engaged in All Scientific Activities, by Activity and by Category, 1978-79 to 1985-86

Activity and category	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(r)	1985-86(e)
	(person-years)							
Research & development:								
Scientific & professional ...	49	63	57	44	49	44	42	51
Technical	29	41	41	42	40	37	42	37
Other	9	12	15	11	8	4	8	8
Sub-total	87	116	113	97	97	85	92	96
Related scientific activities:								
Scientific & professional ...	162	183	151	157	192	192	215	207
Technical	110	111	124	108	170	168	139	154
Other	76	93	105	91	89	100	111	109
Sub-total	348	387	380	356	451	460	465	470
Total science activities:								
Scientific & professional....	211	246	208	201	241	236	257	258
Technical	139	152	165	150	210	205	181	191
Other	85	105	120	102	97	104	119	117
**Total	**435**	**503**	**493**	**453**	**548**	**545**	**557**	**566**

Government of Saskatchewan

TABLE 7. Total Expenditures in All Sciences, by Sources of Funds, 1984-85

Department or Agency	Departmental budget	Transfers from other departments	Transfers from federal government	From Trust Funds	From other sources	Total
	($'000)					
Advanced Education & Manpower ..	1,328	-	-	-	-	1,328
Agriculture	6,168	-	-	-	445	6,613
Archives Board	857	-	-	-	63	920
Assessment Authority	53	-	-	-	-	53
Cancer Foundation	391	-	-	-	16	407
Consumer & Commercial Affairs ..	295	-	-		-	295
Co-operation & Co-op Dev't	224	-	-	-	-	224
Culture & Recreation	464	-	-	-	-	464
Economic Dev't & Trade	647	-	-	-	-	647
Education	200	-	-	-	-	200
Energy & Mines	117	-	1,858	-	2,299	4,274
Environment	755	-	-	-	-	755
Executive Council	383	-	3	-	-	386
Finance	1,052	-	-	-	-	1,052
Health	8,109	-	325	854	20	9,308
Highway Traffic Board	84	-	-	-	-	84
Highways & Transportation	1,628	-	-	-	-	1,628
Indian & Native Affairs Secr't .	205	-	-	-	-	205

Government of Saskatchewan

TABLE 7. Total Expenditures in All Sciences, by Sources of Funds, 1984-85 - Concluded

Department or Agency	Departmental budget	Transfers from other departments	Transfers from federal government	From Trust Funds	From other sources	Total
	($'000)					
Justice	1,248	-	247	-	-	1,495
Labour	212	-	-	-	-	212
Parks & Renewable Resources	1,401	-	-	-	8	1,409
Public Service Commission	202	-	-	-	-	202
Revenue & Financial Services	102	-	-	-	-	102
Rural Development	264	-	-	-	-	264
Saskatchewan Housing Corp.	318	-	-	-	-	318
Saskatchewan Library	30	-	-	-	-	30
Science & Technology	999	-	-	-	1,478	2,477
Social Services	2,892	-	-	-	-	2,892
Supply & Services	1,897	57	-	-	-	1,954
Tourism & Small Business	264	-	-	-	-	264
Urban Affairs	785	-	-	-	-	785
Water Corporation	755	-	-	-	-	755
Women's Secretariat	38	-	-	-	-	38
Vote 35	4,106	-	-	-	-	4,106
Total	38,473	57	2,433	854	4,329	46,146

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TABLE 8. Total Expenditures in All Sciences, by Activity and Performer, 1984-85

Activity	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Research and development:							
Current expenditures:							
In-house	2,658	...	...	...	...	...	2,658
Contracts	225	3,519	170	-	150	201	4,265
Grants	210	85	5,534	886	4,165	206	11,086
Research fellowships	-	-	92	-	-	-	92
Sub-total	3,093	3,604	5,796	886	4,315	407	18,101
Capital expenditures	167	...	...	...	...	...	167
Related scientific activities:							
Current expenditures	20,034	4,062	1,236	-	145	1,596	27,073
Capital expenditures	805	...	...	...	...	...	805
Total	**24,099**	**7,666**	**7,032**	**886**	**4,460**	**2,003**	**46,146**

(1) Includes only Provincial Government payments to the SRC.

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TABLE 9. Total Expenditures in All Sciences, by Department or Agency and Performer, 1984-85

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Advanced Education & Manpower ..	451	-	-	-	-	877	1,328
Agriculture	1,606	75	4,523	-	22	387	6,613
Archives Board	920	-	-	-	-	-	920
Assessment Authority	53	-	-	-	-	-	53
Cancer Foundation	407	-	-	-	-	-	407
Consumer & Commercial Affairs ..	295	-	-	-	-	-	295
Co-operation & Co-op Dev't	90	-	131	-	-	3	224
Culture & Recreation	449	5	-	-	-	10	464
Economic Dev't & Trade	114	533	-	-	-	-	647
Education	191	-	1	-	3	5	200
Energy & Mines	541	3,264	292	-	150	27	4,274
Environment	444	147	106	-	22	36	755
Executive Council	146	107	94	-	-	39	386
Finance	1,052	-	-	-	-	-	1,052
Health	7,460	-	935	886	-	27	9,308
Highway Traffic Board	84	-	-	-	-	-	84

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TABLE 9. Total Expenditures in All Sciences, by Department or Agency and Performer, 1984-85 - Concluded

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Highways & Transportation	1,483	42	25	-	-	78	1,628
Indian & Native Affairs Secr't .	40	85	-	-	-	80	205
Justice	1,495	-	-	-	-	-	1,495
Labour	212	-	-	-	-	-	212
Parks & Renewable Resources	1,368	8	18	-	-	15	1,409
Public Service Commission	196	-	-	-	-	6	202
Revenue & Financial Services ...	62	40	-	-	-	-	102
Rural Development	113	151	-	-	-	-	264
Saskatchewan Housing Corp.	318	-	-	-	-	-	318
Sasakatchewan Library	30	-	-	-	-	-	30
Science & Technology	939	628	770	-	68	72	2,477
Social Services	767	1,800	109	-	37	179	2,892
Supply & Services	1,719	137	3	-	20	75	1,954
Tourism & Small Business	60	152	10	-	32	10	264
Urban Affairs	426	334	13	-	-	12	785
Water Corporation	530	158	2	-	-	65	755
Women's Secretariat	38	-	-	-	-	-	38
Vote 35	-	-	-	-	4,106	-	4,106
**Total	**24,099**	**7,666**	**7,032**	**886**	**4,460**	**2,003**	**46,146**

(1) Includes only Provincial Government payments to the SRC.

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TABLE 10. Current Expenditures in All Sciences, by Department or Agency and Activity, 1984-85

Department or Agency	Research & development	Related scientific activities	Total
	($'000)		
Advanced Education	-	1,328	1,328
Agriculture	4,989	1,592	6,581
Archives Board	-	882	882
Assessment Authority	-	53	53
Cancer Foundation	355	-	355
Consumer & Commercial Affairs ..	-	295	295
Co-operation & Co-op Dev't	-	224	224
Culture & Recreation	36	419	455
Economic Dev't & Trade	-	647	647
Education	-	200	200
Energy & Mines	3,378	896	4,274
Environment	55	700	755
Executive Council	181	205	386
Finance	-	1,052	1,052
Health	2,846	6,211	9,057
Highway Traffic Board	-	84	84
Highways & Transportation	225	1,403	1,628

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TABLE 10. Current Expenditures in All Sciences, by Department or Agency and Activity, 1984-85 - Concluded

Department or Agency	Research & development	Related scientific activities	Total
	($'000)		
Indian & Native Affairs Secr't .	-	205	205
Justice	-	1,495	1,495
Labour	-	212	212
Parks & Renewable Resources	621	788	1,409
Public Service Commission	-	202	202
Revenue & Financial Services ...	-	102	102
Rural Development	-	264	264
Saskatchewan Housing Corp.	-	318	318
Saskatchewan Library	-	30	30
Science & Technology	986	1,491	2,477
Social Services	141	2,751	2,892
Supply & Services	102	1,262	1,364
Tourism & Small Business	-	264	264
Urban Affairs	-	785	785
Water Corporation	80	675	755
Women's Secretariat	-	38	38
Vote 35	4,106	-	4,106
**Total ..... **	**18,101**	**27,073**	**45,174**

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TABLE 11. Current Expenditures on R&D in All Sciences, by Department or Agency and Performer, 1984-85

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Agriculture	215	10	4,425	-	22	317	4,989
Cancer Foundation	355	-	-	-	-	-	355
Culture & Recreation	36	-	-	-	-	-	36
Energy & Mines	176	2,895	157	-	150	-	3,378
Environment	-	-	55	-	-	-	55
Executive Council	74	107	-	-	-	-	181
Health	1,371	-	562	886	-	27	2,846
Highways & Transportation	152	-	22	-	-	51	225
Parks & Renewable Resources	583	8	18	-	-	12	621
Science & Technology	49	487	450	-	-	-	986
Social Services	-	-	104	-	37	-	141
Supply & Services	82	17	3	-	-	-	102
Water Corporation	-	80	-		-		80
Vote 35	-	-	-	-	4,106	-	4,106
Total	**3,093**	**3,604**	**5,796**	**886**	**4,315**	**407**	**18,101**

(1) Includeds only Provincial Government payments to the SRC.

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TABLE 12. Detail of Intramural Expenditures in All Sciences, by Department or Agency and Expenditure, 1984-85

Department or Agency	Current expenditures		Capital expenditures	Total
	Personnel costs	Other costs		
	($'000)			
Advanced Education & Manpower ..	407	44	-	451
Agriculture	1,274	300	32	1,606
Archives Board	687	195	38	920
Assessment Authority	53	-	-	53
Cancer Foundation	309	46	52	407
Consumer & Commercial Affairs ..	231	64	-	295
Co-operation & Co-op Dev't	90	-	-	90
Culture & Recreation	375	65	9	449
Economic Dev't & Trade	114	-	-	114
Education	170	21	-	191
Energy & Mines	161	380	-	541
Environment	282	162	-	444
Executive Council	106	40	-	146
Finance	873	179	-	1,052
Health	5,265	1,944	251	7,460
Highway Traffic Board	76	8	-	84
Highways & Transportation	1,038	445	-	1,483

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TABLE 12. Detail of Intramural Expenditures in All Sciences, by Department or Agency and Expenditure, 1984-85 - Concluded

Department or Agency	Current expenditures		Capital expenditures	Total
	Personnel costs	Other costs		
	($'000)			
Indian & Native Affairs Secr't	40	-	-	40
Justice	1,295	200	-	1,495
Labour	124	88	-	212
Parks & Renewable Resources	856	512	-	1,368
Public Service Commission	181	15	-	196
Revenue & Financial Services ...	62	-	-	62
Rural Development	102	11	-	113
Saskatchewan Housing Corp.	256	62	-	318
Saskatchewan Library	20	10	-	30
Science & Technology	703	236	-	939
Social Services	673	94	-	767
Supply & Services	1,089	40	590	1,719
Tourism & Small Business	60	-	-	60
Urban Affairs	401	25	-	426
Water Corporation	500	30	-	530
Women's Secretariat	38	-	-	38
**Total ..... **	**17,911**	**5,216**	**972**	**24,099**

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TABLE 13. Departmental Personnel Engaged in All Scientific Activities, by Department or Agency, 1984-85

Department or Agency	Research & development				Related scientific activities			
	Scientific & professional	Technical	Other	Total	Scientific & professional	Technical	Other	Total
	(person-years)							
Advanced Education & Manpower ..	-	-	-	-	-	-	11	11
Agriculture	7	-	-	7	21	5	6	32
Archives Board	-	-	-	-	12	3	8	23
Assessment Authority	-	-	-	-	2	-	-	2
Cancer Foundation	-	14	-	14	-	-	-	-
Consumer & Commercial Affairs ..	-	-	-	-	4	-	-	4
Co-operation & Co-op Dev't	-	-	-	-	1	1	-	2
Culture & Recreation	1	-	-	1	7	4	-	11
Economic Dev't & Trade	-	-	-	-	4	-	-	4
Education	-	-	-	-	1	-	4	5
Energy & Mines	2	-	1	3	1	-	-	1
Environment	-	-	-	-	3	5	1	9
Executive Council	2	1	-	3	1	2	-	3
Finance	-	-	-	-	20	-	4	24
Health	16	19	3	38	32	58	52	142
Highway Traffic Board	-	-	-	-	2	-	-	2

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TABLE 13. Departmental Personnel Engaged in All Scientific Activities, by Department or Agency, 1984-85 - Concluded

Department or Agency	Research & development				Related scientific activities			
	Scientific & professional	Technical	Other	Total	Scientific & professional	Technical	Other	Total
	(person-years)							
Highways & Transportation	2	2	1	5	3	30	5	38
Indian & Native Affairs Secr't .	-	-	-	-	1	-	-	1
Justice	-	-	-	-	18	-	10	28
Labour	-	-	-	-	4	-	1	5
Parks & Renewable Resources	8	6	3	17	9	9	-	18
Public Service Commission	-	-	-	-	4	-	-	4
Revenue & Financial Services ...	-	-	-	-	2	-	-	2
Rural Development	-	-	-	-	2	1	-	3
Saskatchewan Housing Corp.	-	-	-	-	7	-	-	7
Saskatchewan Library	-	-	-	-	1	-	-	1
Science & Technology	2	-	-	2	9	-	6	15
Social Services	-	-	-	-	15	-	1	16
Supply & Services	2	-	-	2	18	3	2	23
Tourism & Small Business	-	-	-	-	2	-	-	2
Urban Affairs	-	-	-	-	6	-	-	6
Water Corporation	-	-	-	-	2	18	-	20
Women's Secretariat	-	-	-	-	1	-	-	1
**Total	**42**	**42**	**8**	**92**	**215**	**139**	**111**	**465**

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TABLE 14. Objectives of Expenditures in All Sciences, by Department or Agency, 1984-85

Department or Agency	Advancement of Science	Communications	Energy & Fuels				Environmental Issues		
			Conservation	Fossil fuels	Renewable Resources	Other	Land	Water	Other
	($'000)								
Advanced Education & Manpower ..	-	-	-	-	-	-	-	-	-
Agriculture	-	-	-	-	-	-	-	-	-
Archives Board	-	-	-	-	-	-	-	-	-
Assessment Authority	-	-	-	-	-	-	-	-	-
Cancer Foundation	-	-	-	-	-	-	-	-	-
Consumer & Commercial Affairs ..	-	-	-	-	-	-	-	-	-
Co-operation & Co-op Dev't	-	-	-	-	-	-	-	-	-
Culture & Recreation	36	-	-	-	-	-	-	-	-
Economic Dev't & Trade	-	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-	-
Energy & Mines	-	-	94	3,690	41	-	-	-	732
Environment	-	-	-	-	-	-	-	-	-
Executive Council	146	-	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-	-	-
Health	-	-	-	-	-	-	-	-	-
Highway Traffic Board	-	-	-	-	-	-	-	-	-
Highways & Transportation	-	-	-	-	-	-	-	-	-

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TABLE 14. Objectives of Expenditures in All Sciences, by Department or Agency, 1984-85 - Continued

Department or Agency	Advancement of Science	Communications	Energy & Fuels				Environmental Issues		
			Conservation	Fossil fuels	Renewable Resources	Other	Land	Water	Other
	($'000)								
Indian & Native Affairs Secr't .	-	12	-	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-	-	-
Labour	-	-	-	-	-	-	-	-	-
Parks & Renewable Resources	-	-	-	-	-	-	-	132	550
Public Service Commission	-	-	-	-	-	-	-	-	-
Revenue & Financial Services ...	-	-	-	-	-	-	-	-	-
Rural Development	-	-	-	-	-	-	-	-	-
Saskatchewan Housing Corp.	-	-	-	-	-	-	-	-	-
Saskatchewan Library	-	-	-	-	-	-	-	-	-
Science & Technology	976	-	2	38	39	450	-	-	-
Social Services	-	-	-	-	-	-	-	-	-
Supply & Services	-	-	-	-	-	-	10	-	-
Tourism & Small Business	-	-	-	-	-	-	-	-	-
Urban Affairs	-	-	-	-	-	-	-	-	-
Water Corporation	-	-	-	-	-	-	-	755	-
Women's Secretariat	-	-	-	-	-	-	-	-	-
Vote 35	263	-	-	-	-	258	-	-	780
**Total	1,421	12	96	3,728	80	708	10	887	2,062

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TABLE 14. Objectives of Expenditures in All Sciences, by Department or Agency, 1984-85 - Continued

Department or Agency	Health	Industrial and economic development					
		Agriculture	Fisheries	Forestry	Mfg	Minerals	Other
	($'000)						
Advanced Education & Manpower ..	-	-	-	-	-	-	-
Agriculture	-	6,613	-	-	-	-	-
Archives Board	-	-	-	-	-	-	-
Assessment Authority	-	-	-	-	-	-	-
Cancer Foundation	407	-	-	-	-	-	-
Consumer & Commercial Affairs ..	-	-	-	-	-	-	-
Co-operation & Co-op Dev't	-	20	-	-	-	-	20
Culture & Recreation	-	-	-	-	-	-	-
Economic Dev't & Trade	-	-	-	-	647	-	-
Education	-	-	-	-	-	-	-
Energy & Mines	-	-	-	-	-	449	-
Environment	-	-	-	-	-	-	-
Executive Council	-	34	-	-	-	30	77
Finance	-	-	-	-	-	-	-
Health	9,246	-	-	-	-	-	-
Highway Traffic Board	-	-	-	-	-	-	-
Highways & Transportation	-	-	-	-	-	-	-

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TABLE 14. Objectives of Expenditures in All Sciences, by Department or Agency, 1984-85 - Continued

Department or Agency	Health	Industrial and economic development					
		Agriculture	Fisheries	Forestry	Mfg	Minerals	Other
	($'000)						
Indian & Native Affairs Secr't .	-	-	-	-	-	-	57
Justice	-	-	-	-	-	-	-
Labour	-	-	-	-	-	-	-
Parks & Renewable Resources	-	-	534	193	-	-	-
Public Service Commission	-	-	-	-	-	-	-
Revenue & Financial Services ...	-	-	-	-	-	-	-
Rural Development	-	-	-	-	-	-	-
Saskatchewan Housing Corp.	-	-	-	-	-	-	-
Saskatchewan Library	-	-	-	-	-	-	-
Science & Technology	-	123	-	-	849	-	-
Social Services	141	-	-	-	-	-	-
Supply & Services	-	15	-	-	-	15	350
Tourism & Small Business	-	26	36	-	-	-	202
Urban Affairs	-	-	-	-	-	-	-
Water Corporation	-	-	-	-	-	-	-
Women's Secretariat	-	-	-	-	-	-	-
Vote 35	-	534	-	-	575	792	904
**Total	**9,794**	**7,365**	**570**	**193**	**2,071**	**1,286**	**1,610**

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TABLE 14. Objectives of Expenditures in All Sciences, by Department or Agency 1984-85 - Continued

Department or Agency	Social development & related areas					Transportation	Other	Total
	Culture, sport & recreation	Education	Human Resources	Urban & regional studies	Other			
	($'000)							
Advanced Education & Manpower ..	874	386	68	-	-	-	-	1,328
Agriculture	-	-	-	-	-	-	-	6,613
Archives Board	-	-	-	-	920	-	-	920
Assessment Authority	-	-	-	53	-	-	-	53
Cancer Foundation	-	-	-	-	-	-	-	407
Consumer & Commercial Affairs ..	-	-	-	-	295	-	-	295
Co-operation & Co-op Dev't	-	-	144	-	40	-	-	224
Culture & Recreation	428	-	-	-	-	-	-	464
Economic Dev't & Trade	-	-	-	-	-	-	-	647
Education	-	200	-	-	-	-	-	200
Energy & Mines	-	-	-	-	-	-	-	4,274
Environment	-	-	-	23	-	-	-	755
Executive Council	-	-	-	60	-	-	39	386
Finance	-	-	-	-	-	-	1,052	1,052
Health	-	62	-	-	-	-	-	9,308
Highway Traffic Board	-	-	-	-	-	84	-	84
Highways & Transportation	-	-	-	-	-	1,628	-	1,628

TABLE 14. Objectives of Expenditures in All Sciences, by Department or Agency 1984-85 - Concluded

Department or Agency	Social development & related areas					Transportation	Other	Total
	Culture, sport & recreation	Education	Human Resources	Urban & regional studies	Other			
	($'000)							
Indian & Native Affairs Scer't .	-	-	-	-	136	-	-	205
Justice	-	-	-	-	1,495	-	-	1,495
Labour	-	-	212	-	-	-	-	212
Parks & Renewable Resources	-	-	-	-	-	-	-	1,409
Public Service Commission	-	-	202	-	-	-	-	202
Revenue & Financial Services ...	-	-	73	-	29	-	-	102
Rural Development	-	-	-	67	-	197	-	264
Saskatchewan Housing Corp.	-	-	-	318	-	-	-	318
Saskatchewan Library	30	-	-	-	-	-	-	30
Science & Technology	-	-	-	-	-	-	-	2,477
Social Services	-	-	-	-	2,751	-		2,892
Supply & Services	-	-	-	40	-	10	1,514	1,954
Tourism & Small Business	-	-	-	-	-	-	-	264
Urban Affairs	-	-	-	785	-	-	-	785
Water Corporation	-	-	-	-	-	-	-	755
Women's Secretariat	-	-	-	-	38	-	-	38
Vote 35	-	-	-	-	-	-	-	4,106
**Total	**1,332**	**648**	**699**	**1,346**	**5,704**	**1,919**	**2,605**	**46,146**

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TABLE 15. Objectives of Expenditures in All Sciences, by Activity, 1984-85

Objective	Intramural		Extramural		Total
	Research & development	Related scientific activities	Research & development	Related scientific activities	
	($'000)				
Advancement of science	110	721	263	327	1,421
Communications	-	-	-	12	12
Energy & fuels:					
Conservation	-	15	-	81	96
Fossil fuels	176	32	3,202	381	3,728
Renewable Resources	-	7	-	73	80
Other	-	-	708	-	708
Environmental issues:					
Land	-	10	-	-	10
Water	-	662	80	145	887
Other	72	878	864	248	2,062
Health	1,893	5,974	1,616	311	9,794
Industrial & economic development:					
Agriculture	220	1,431	5,431	283	7,365

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TABLE 15. Objectives of Expenditures in All Sciences, by Activity, 1984-85 - Concluded

Objective	Intramural		Extramural		Total
	Research & development	Related scientific activities	Research & development	Related scientific activities	
	($'000)				
Fisheries	371	170	3	26	570
Forestry	140	47	6	-	193
Manufacturing	49	355	939	728	2,071
Minerals	5	321	822	138	1,286
Other	30	260	1,001	319	1,610
Social development & related areas:					
Culture, sport & recreation	-	443	-	889	1,332
Education	-	574	-	74	648
Human resources	-	519	-	180	699
Urban & regional studies	10	886	-	450	1,346
Other	-	3,624	-	2,080	5,704
Transportation	152	1,471	73	223	1,919
Other	32	2,439	-	134	2,605
Total	**3,260**	**20,839**	**15,008**	**7,039**	**46,146**

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TABLE 16. Total Expenditures in All Sciences, by Activity and Performer, 1985-86(e)

Activity	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Research and development:							
Current expenditures:							
In-house	2,261	...	...	...	...	...	2,261
Contracts	402	6,302	456	-	3,200	649	11,009
Grants	791	110	6,408	348	4,233	30	11,920
Research fellowships	-	-	281	-	-	-	281
Sub-total	3,454	6,412	7,145	348	7,433	679	25,471
Capital expenditures	108	...	...	...	...	...	108
Related scientific activities:							
Current expenditures	20,046	6,465	1,625	-	74	1,807	30,017
Capital expenditures	217	...	...	...	...	...	217
Total	**23,825**	**12,877**	**8,770**	**348**	**7,507**	**2,486**	**55,813**

(1) Includes only Provincial Government payments to the SRC.

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TABLE 17. Total Expenditures in All Sciences, by Department or Agency and Performer, 1985-86(e)

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Advanced Education & Manpower ..	325	-	-	-	-	874	1,199
Agriculture	1,643	3,730	5,095	-	15	428	10,911
Archives Board	1,054	-	-	-	-	-	1,054
Assessment Authority	55	-	-	-	-	-	55
Cancer Foundation	350	-	-	-	-	-	350
Consumer & Commercial Affairs ..	295	-	-	-	-	-	295
Co-operation & Co-op Dev't	85	-	136	-	-	-	221
Culture & Recreation	475	5	-	-	-	7	487
Economic Dev't & Trade	120	887	-	-	-	-	1,007
Education	190	-	50	-	-	80	320
Employment Dev't Agency	350	-	-	-	-	-	350
Energy & Mines	711	1,562	518	-	3,205	-	5,996
Environment	449	161	116	-	24	40	790
Executive Council	152	110	170	-	-	39	471
Finance	1,086	-	-	-	-	-	1,086
Health	7,555	-	1,078	348	-	-	8,981
Highway Traffic Board	83	-	-	-	-	-	83
Highways & Transportation	1,480	43	30	-	-	600	2,153

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TABLE 17. Total Expenditures in All Sciences, by Department or Agency and Performer, 1985-86(e) - Concluded

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Indian & Native Affairs Secr't .	-	102	-	-	-	80	182
Justice	1,500	-	-	-	-	-	1,500
Labour	142	-	-	-	-	-	142
Parks & Renewable Resources	1,103	-	24	-	-	-	1,127
Public Service Commission	211	-	-	-	-	5	216
Revenue & Financial Services ...	66	80	-	-	-	-	146
Rural Development	121	155	-	-	-	-	276
Saskatchewan Housing Corp.	318	-	-	-	-	-	318
Saskatchewan Library	10	-	-	-	-	-	10
Science & Technology	1,424	2,936	1,444	-	120	114	6,038
Social Services	801	2,400	109	-	37	192	3,539
Supply & Services	405	132	-	-	-	-	537
Tourism & Small Business	60	373	-	-	25	-	458
Urban Affairs	426	101	-	-	-	12	539
Water Corporation	750	100	-	-	-	-	850
Women's Secretariat	30	-	-	-	-	15	45
Vote 35	-	-	-	-	4,081	-	4,081
**Total ..... **	**23,825**	**12,877**	**8,770**	**348**	**7,507**	**2,486**	**55,813**

(1) Includes only Provincial Government payments to the SRC.

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TABLE 19. Current Expenditures on R&D in All Sciences, by Department or Agency and Performer, 1985-86(e)

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Agriculture	494	3,610	4,864	-	15	279	9,262
Cancer Foundation	300	-	-	-	-	-	300
Culture & Recreation	36	-	-	-	-	-	36
Energy & Mines	342	1,001	400	-	3,200	-	4,943
Environment	-	-	60	-	-	-	60
Executive Council	76	110	-	-	-	-	186
Health	1,379	-	816	348	-	-	2,543
Highways & Transportation	150	-	28	-	-	400	578
Parks & Renewable Resources	522	-	24	-	-	-	546
Science & Technology	60	1,579	849	-	100	-	2,588
Social Services	-	-	104	-	37	-	141
Supply & Services	95	12	-	-	-	-	107
Water Corporation	-	100	-	-	-	-	100
Vote 35	-	-	-	-	4,081	-	4,081
Total	**3,454**	**6,412**	**7,145**	**348**	**7,433**	**679**	**25,471**

(1) Includes only Provincial Government payments to the SRC.

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TABLE 20. Departmental Personnel Engaged in All Scientific Activities, by Department or Agency, 1985-86(e)

Department or Agency	Research & development				Related scientific activities			
	Scientific & professional	Technical	Other	Total	Scientific & professional	Technical	Other	Total
	(person-years)							
Advanced Education & Manpower ..	-	-	-	-	-	-	8	8
Agriculture	14	1	-	15	19	3	5	27
Archives Board	-	-	-	-	13	4	11	28
Assessment Authority	-	-	-	-	2	-	-	2
Cancer Foundation	-	8	-	8	-	-	-	-
Consumer & Commercial Affairs ..	-	-	-	-	4	-	-	4
Co-operation & Co-op Dev't	-	-	-	-	1	1	-	2
Culture & Recreation	2	-	-	2	7	4	-	11
Economic Dev't & Trade	-	-	-	-	4	-	-	4
Education	-	-	-	-	1	-	4	5
Employment Dev't Agency	-	-	-	-	6	-	1	7
Energy & Mines	3	-	1	4	1	-	-	1
Environment	-	-	-	-	2	6	1	9
Executive Council	2	1	-	3	1	2	-	3
Finance	-	-	-	-	19	-	4	23
Health	17	21	3	41	33	58	51	142
Highway Traffic Board	-	-	-	-	2	-	-	2
Highways & Transportation	2	2	1	5	3	30	5	38

TABLE 20. Departmental Personnel Engaged in All Scientific Activities, by Department or Agency, 1985-86(e) - Concluded

Department or Agency	Research & development				Related scientific activities			
	Scientific & professional	Technical	Other	Total	Scientific & professional	Technical	Other	Total
	(person-years)							
Indian & Native Affairs Secr't .	-	-	-	-	-	-	-	-
Justice	-	-	-	-	18	-	10	28
Labour	-	-	-	-	2	-	1	3
Parks & Renewable Resources	8	4	3	15	5	6	-	11
Public Service Commission	-	-	-	-	5	-	-	5
Revenue & Financial Services ...	-	-	-	-	2	-	-	2
Rural Development	-	-	-	-	2	1	-	3
Saskatchewan Housing Corp.	-	-	-	-	7	-	-	7
Saskatchewan Library	-	-	-	-	1	-	-	1
Science & Technology	2	-	-	2	14	-	5	19
Social Services	-	-	-	-	19	-	3	22
Supply & Services	1	-	-	1	1	3	-	4
Tourism & Small Business	-	-	-	-	2	-	-	2
Urban Affairs	-	-	-	-	6	-	-	6
Water Corporation	-	-	-	-	4	36	-	40
Women's Secretariat	-	-	-	-	1	-	-	1
**Total ..... **	**51**	**37**	**8**	**96**	**207**	**154**	**109**	**470**

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TABLE 21. Objectives of Expenditures in All Sciences, by Department or Agency, 1985-86(e)

Department or Agency	Advancement of Science	Energy & Fuels		Environmental Issues	
		Fossil fuels	Other	Water	Other
	($'000)				
Advanced Education & Manpower ..	-	-	-	-	-
Agriculture	-	-	-	-	-
Archives Board	-	-	-	-	-
Assessment Authority	-	-	-	-	-
Cancer Foundation	-	-	-	-	-
Consumer & Commercial Affairs ..	-	-	-	-	-
Co-operation & Co-op Dev't	-	-	-	-	-
Culture & Recreation	36	-	-	-	-
Economic Dev't & Trade	-	-	-	-	-
Education	-	-	-	-	-
Energy & Mines	-	5,546	-	-	-
Environment	-	-	-	-	765
Executive Council	152	-	-	-	-
Finance	-	-	-	-	-
Health	-	-	-	-	-
Highway Traffic Board	-	-	-	-	-
Highways & Transportation	-	-	-	-	-

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TABLE 21. Objectives of Expenditures in All Sciences, by Department or Agency, 1985-86(e) - Continued

Department or Agency	Advancement of Science	Energy & Fuels		Environmental Issues	
		Fossil fuels	Other	Water	Other
	($'000)				
Indian & Native Affairs Secr't .	-	-	-	-	-
Justice	-	-	-	-	-
Labour	-	-	-	-	-
Parks & Renewable Resources	-	-	-	99	498
Public Service Commission	-	-	-	-	-
Revenue & Financial Services ...	-	-	-	-	-
Rural Development	-	-	-	-	-
Saskatchewan Housing Corp.	-	-	-	-	-
Saskatchewan Library	-	-	-	-	-
Science & Technology	1,594	-	-	-	-
Social Services	-	-	-	-	-
Supply & Services	-	-	-	-	-
Tourism & Small Business	-	-	-	-	-
Urban Affairs	-	-	-	-	-
Water Corporation	-	-	-	850	-
Women's Secretariat	-	-	-	-	-
Vote 35	261	-	257	-	775
**Total ..... **	**2,043**	**5,546**	**257**	**949**	**2,038**

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TABLE 21. Objectives of Expenditures in All Sciences, by Department or Agency, 1985-86(e) - Continued

Department or Agency	Health	Industrial and economic development					
		Agriculture	Fisheries	Forestry	Mfg	Minerals	Other
	($'000)						
Advanced Education & Manpower ..	-	-	-	-	-	-	-
Agriculture	-	10,911	-	-	-	-	-
Archives Board	-	-	-	-	-	-	-
Assessment Authority	-	-	-	-	-	-	-
Cancer Foundation	350	-	-	-	-	-	-
Consumer & Commercial Affairs ..	-	-	-	-	-	-	-
Co-operation & Co-op Dev't	-	10	-	-	-	-	10
Culture & Recreation	-	-	-	-	-	-	-
Economic Dev't & Trade	-	-	-	-	1,007	-	-
Education	-	-	-	-	-	-	-
Energy & Mines	-	-	-	-	-	450	-
Environment							
Executive Council	-	110	-	-	-	30	80
Finance	-	-	-	-	-	-	-
Health	8,919	-	-	-	-	-	-
Highway Traffic Board	-	-	-	-	-	-	-
Highways & Transportation	-	-	-	-	-	-	-

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TABLE 21. Objectives of Expenditures in All Sciences, by Department or Agency, 1985-86(e) - Continued

Department or Agency	Health	Industrial and economic development					
		Agriculture	Fisheries	Forestry	Mfg	Minerals	Other
	($'000)						
Indian & Native Affairs Secr't .	-	-	-	-	-	-	102
Justice	-	-	-	-	-	-	-
Labour	-	-	-	-	-	-	-
Parks & Renewable Resources	-	-	335	195	-	-	-
Public Service Commission	-	-	-	-	-	-	-
Revenue & Financial Services ...	-	-	-	-	-	-	-
Rural Development	-	-	-	-	-	-	-
Saskatchewan Housing Corp.	-	-	-	-	-	-	-
Saskatchewan Library	-	-	-	-	-	-	-
Science & Technology	-	200	-	-	4,244	-	-
Social Services	141	-	-	-	-	-	-
Supply & Services	-	18	18	-	-	-	367
Tourism & Small Business	-	-	45	-	-	-	413
Urban Affairs	-	-	-	-	-	-	-
Water Corporation	-	-	-	-	-	-	-
Women's Secretariat	-	-	-	-	-	-	-
Vote 35	-	531	-	-	572	787	898
**Total	**9,410**	**11,780**	**398**	**195**	**5,823**	**1,267**	**1,870**

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TABLE 21. Objectives of Expenditures in All Sciences, by Department or Agency 1985-86(e) - Continued

Department or Agency	Social development & related areas					Transportation	Other	Total
	Culture, sport & recreation	Education	Human Resources	Urban & regional studies	Other			
	($'000)							
Advanced Education & Manpower ..	874	309	16	-	-	-	-	1,199
Agriculture	-	-	-	-	-	-	-	10,911
Archives Board	-	-	-	-	1,054	-	-	1,054
Assessment Authority	-	-	-	55	-	-	-	55
Cancer Foundation	-	-	-	-	-	-	-	350
Consumer & Commercial Affairs ..	-	-	-	-	295	-	-	295
Co-operation & Co-op Dev't	-	-	171	-	30	-	-	221
Culture & Recreation	451	-	-	-	-	-	-	487
Economic Dev't & Trade	-	-	-	-	-	-	-	1,007
Education	-	320	-	-	-	-	-	320
Employment Development Agency ..	-	-	350	-	-	-	-	350
Energy & Mines	-	-	-	-	-	-	-	5,996
Environment	-	-	-	25	-	-	-	790
Executive Council	-	-	-	60	-	-	39	471
Finance	-	-	-	-	-	-	1,086	1,086
Health	-	62	-	-	-	-	-	8,981
Highway Traffic Board	-	-	-	-	-	83	-	83
Highways & Transportation	-	-	-	-	-	2,153	-	2,153

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TABLE 21. Objectives of Expenditures in All Sciences, by Department or Agency 1985-86(e) - Concluded

Department or Agency	Social development & related areas					Transportation	Other	Total
	Culture, sport & recreation	Education	Human Resources	Urban & regional studies	Other			
	($'000)							
Indian & Native Affairs Scer't	-	-	-	-	80	-	-	182
Justice	-	-	-	-	1,500	-	-	1,500
Labour	-	-	142	-	-	-	-	142
Parks & Renewable Resources	-	-	-	-	-	-	-	1,127
Public Service Commission	-	-	216	-	-	-	-	216
Revenue & Financial Services ...	-	-	113	-	33	-	-	146
Rural Development	-	-	-	71	-	205	-	276
Saskatchewan Housing Corp.	-	-	-	318	-	-	-	318
Saskatchewan Library	10	-	-	-	-	-	-	10
Science & Technology	-	-	-	-	-	-	-	6,038
Social Services	-	-	-	-	3,398	-		3,539
Supply & Services	-	-	-	48	-	6	80	537
Tourism & Small Business	-	-	-	-	-	-	-	458
Urban Affairs	-	-	-	539	-	-	-	539
Water Corporation	-	-	-	-	-	-	-	850
Women's Secretariat	-	-	-	-	45	-	-	45
Vote 35	-	-	-	-	-	-	-	4,081
Total	1,335	691	1,008	1,116	6,435	2,447	1,205	55,813

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TABLE 22. Total Expenditures in the Natural Sciences, by Activity, 1978-79 to 1985-86

Activity	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(r)	1985-86(e)
	($'000)							
Research & development:								
Current Expenditures:								
In-house	1,194	1,465	1,688	1,951	2,688	2,748	2,387	2,078
Contracts	477	408	46	24	649	3,540	4,158	10,899
Grants	6,827	9,819	6,851	7,644	8,418	9,646	10,788	11,658
Fellowships	-	14	21	-	50	122	92	281
Sub-total	8,498	11,706	8,606	9,619	11,805	16,056	17,425	24,916
Capital expenditures	48	96	245	203	99	82	125	81
Related scientific activities:								
Current Expenditures:								
Education support	12	33	32	226	162	101	110	120
Technical surveys	3,197	3,966	4,189	4,387	5,469	4,353	3,350	3,128
Information services	37	41	187	112	734	2,024	2,368	3,251
Special services & studies	2,542	2,750	3,528	3,893	5,807	6,106	5,589	6,955
Museum services	302	349	489	700	82	113	178	190
Sub-total	6,090	7,139	8,425	9,318	12,254	12,697	11,595	13,644
Capital expenditures	336	205	180	158	175	64	217	211
Total	**14,972**	**19,146**	**17,456**	**19,298**	**24,333**	**28,899**	**29,362**	**38,852**

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TABLE 23. Total Expenditures in the Natural Sciences, by Department or Agency, 1978-79 to 1985-86

Department or Agency	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(r)	1985-86(e)
	($'000)							
Agriculture	2,429	1,712	1,997	4,318	6,622	7,636	6,076	10,091
Cancer Foundation	...	...	...	...	241	282	407	350
Culture & Recreation	341	390	541	770	165	166	215	226
Energy & Mines	5,127	8,946	5,052	2,820	3,623	5,183	4,274	5,996
Environment	77	78	517	737	991	687	755	790
Government Insurance Corp	35	55	57	62	...	...	...	...
Health	2,654	2,750	3,760	4,661	4,987	6,379	6,623	6,513
Highways & Transportation	909	867	996	1,056	1,443	1,415	1,628	2,153
Industry & Commerce	84	164	382	99	368	...	...	...
Northern Saskatchewan	282	303	354	279	...	...	...	...
Parks & Renewable Resources	...	...	...	...	2,208	1,980	1,409	1,127
Rural Development	...	...	...	...	166	205	197	205
Science & Technology	...	...	...	...	...	640	2,415	5,968
Supply & Services	...	...	...	...	...	440	440	457
Tourism & Small Business	...	...	...	...	...	10	62	45
Tourism & Renewable Resorces	215	971	1,012	1,405	...	...	...	...
Tptn Agency of Saskatchewan	301	311	60	26	...	...	...	...
Water Corporation	...	...	...	...	...	...	755	850
Vote 35	2,518	2,599	2,728	3,065	3,519	3,876	4,106	4,081
Total	**14,972**	**19,146**	**17,456**	**19,298**	**24,333**	**28,899**	**29,362**	**38,852**

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TABLE 24. Total Expenditures in the Natural Sciences, by Performer, 1978-79 to 1985-86

Performer	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(r)	1985-86(e)
	($'000)							
Intramural	7,215	8,025	9,383	9,842	12,580	13,960	12,668	13,440
Industry	2,299	6,029	3,229	1,043	2,444	4,271	4,554	8,699
Universities	2,110	1,695	1,761	3,746	4,837	5,754	6,244	7,862
Hospitals & health organizations	250	250	200	880	21	88	886	348
Saskatchewan Research Council(1)	2,828	2,934	2,811	3,626	3,834	4,225	4,400	7,470
Other	270	213	72	161	617	601	610	1,033
Total	**14,972**	**19,146**	**17,456**	**19,298**	**24,333**	**28,899**	**29,362**	**38,852**

(1) Includes only Provincial Government payments to the SRC.

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TABLE 25. Current Expenditures on R&D in the Natural Sciences, by Department or Agency, 1978-79 to 1985-86

Department or Agency	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(r)	1985-86(e)
	($'000)							
Agriculture	2,429	1,548	1,997	4,036	4,879	4,554	4,989	9,262
Cancer Foundation	...	...	...	...	182	259	355	300
Culture & Recreation	39	41	52	70	52	10	24	24
Energy & Mines	2,530	6,067	1,994	78	522	3,320	3,378	4,943
Environment	...	...	...	...	...	50	55	60
Government Insurance Corp	32	53	54	57	...	...	...	...
Health	461	625	978	1,468	1,521	2,269	2,536	2,327
Highways & Transportation	181	219	147	197	250	257	225	578
Industry & Commerce	44	133	382	99	344	...	...	...
Northern Saskatchewan	82	88	4	...	...	...	...	...
Parks & Renewable Resources	...	...	...	...	536	931	621	546
Science & Technology	...	...	...	...	...	450	986	2,588
Supply & Services	...	...	...	...	...	70	70	107
Tourism & Renewable Sources	165	316	265	548	...	...	...	...
Tourism & Small Business	...	...	...	...	...	10	...	...
Tptn Agency of Saskatchewan	17	17	5	1	...	...	...	...
Water Corporation	...	...	...	...	...	...	80	100
Vote 35	2,518	2,599	2,728	3,065	3,519	3,876	4,106	4,081
Total	**8,498**	**11,706**	**8,606**	**9,619**	**11,805**	**16,056**	**17,425**	**24,916**

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TABLE 26. Current Expenditures on R&D in the Natural Sciences, by Performer, 1978-79 to 1985-86

Performer	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(r)	1985-86(e)
	($'000)							
Intramural	1,194	1,479	1,688	1,951	2,700	3,243	2,822	3,220
Industry	2,098	5,824	2,239	154	846	3,249	3,497	6,302
Universities	2,045	1,334	1,679	3,524	4,524	5,380	5,562	6,971
Hospitals & health organizations	250	250	200	682	-	82	886	348
Saskatchewan Research Council (1)	2,661	2,685	2,728	3,218	3,555	3,908	4,278	7,396
Other	250	134	72	90	180	194	380	679
**Total	**8,498**	**11,706**	**8,606**	**9,619**	**11,805**	**16,056**	**17,425**	**24,916**

(1) Includes only Provincial Government payments to SRC.

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TABLE 27. Departmental Personnel Engaged in Scientific Activities in the Natural Sciences, by Activity and Category, 1978-79 to 1985-86

Activity and Category	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84(r)	1984-85(r)	1985-86(e)
	(person-years)							
Research & development:								
Scientific & professional .	26	34	32	29	42	37	37	46
Technical	17	26	31	33	39	36	39	32
Other	7	7	10	7	8	4	7	7
Sub-total	50	67	73	69	89	77	83	85
Related scientific activities:								
Scientific & professional .	70	97	58	58	86	60	61	58
Technical	91	92	109	97	156	145	127	139
Other	33	46	60	47	43	31	37	35
Sub-total	194	235	227	202	285	236	225	232
Total natural science activities:								
Scientific & professional .	96	131	90	87	128	97	98	104
Technical	108	118	140	130	195	181	166	171
Other	40	53	70	54	51	35	44	42
**Total	**244**	**302**	**300**	**271**	**374**	**313**	**308**	**317**

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TABLE 28. Total Expenditures in the Natural Sciences, by Sources of Funds, 1984-85

Department or Agency	Departmental budget	Transfers from other departments	Transfers from federal government	From trust funds	From other sources	Total
	($'000)					
Agriculture	5,646	-	-	-	430	6,076
Cancer Foundation	391	-	-	-	16	407
Culture & Recreation	215	-	-	-	-	215
Energy & Mines	117	-	1,858	-	2,299	4,274
Environment	755	-	-	-	-	755
Health	5,836	-	240	547	-	6,623
Highways & Transportation	1,628	-	-	-	-	1,628
Parks & Renewable Resources	1,401	-	-	-	8	1,409
Rural Development	197	-	-	-	-	197
Science & Technology	937	-	-	-	1,478	2,415
Supply & Services	440	-	-	-	-	440
Tourism & Small Business	62	-	-	-	-	62
Water Corporation	755	-	-	-	-	755
Vote 35	4,106	-	-	-	-	4,106
Total	**22,486**	**-**	**2,098**	**547**	**4,231**	**29,362**

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TABLE 29. Total Expenditures in the Natural Sciences, by Activity and Performer, 1984-85

Activity	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Research and development:							
Current expenditures:							
In-house	2,387	...	...	...	...	...	2,387
Contracts	225	3,412	170	-	150	201	4,158
Grants	210	85	5,300	886	4,128	179	10,788
Research fellowships	-	-	92	-	-	-	92
Sub-total	2,822	3,497	5,562	886	4,278	380	17,425
Capital expenditures	125	...	...	...	...	...	125
Related scientific activities:							
Current expenditures:							
Education support	-	-	110	-	-	-	110
Technical surveys	3,033	101	158	-	22	36	3,350
Information services	1,876	130	331	-	29	2	2,368
Special services & studies	4,417	826	83	-	71	192	5,589
Museum services	178	-	-	-	-	-	178
Sub-total	9,504	1,057	682	-	122	230	11,595
Capital expenditures	217	...	...	...	...	...	217
Total	**12,668**	**4,554**	**6,244**	**886**	**4,400**	**610**	**29,362**

(1) Includes only Provincial Government payments to the SRC.

Figure 2.

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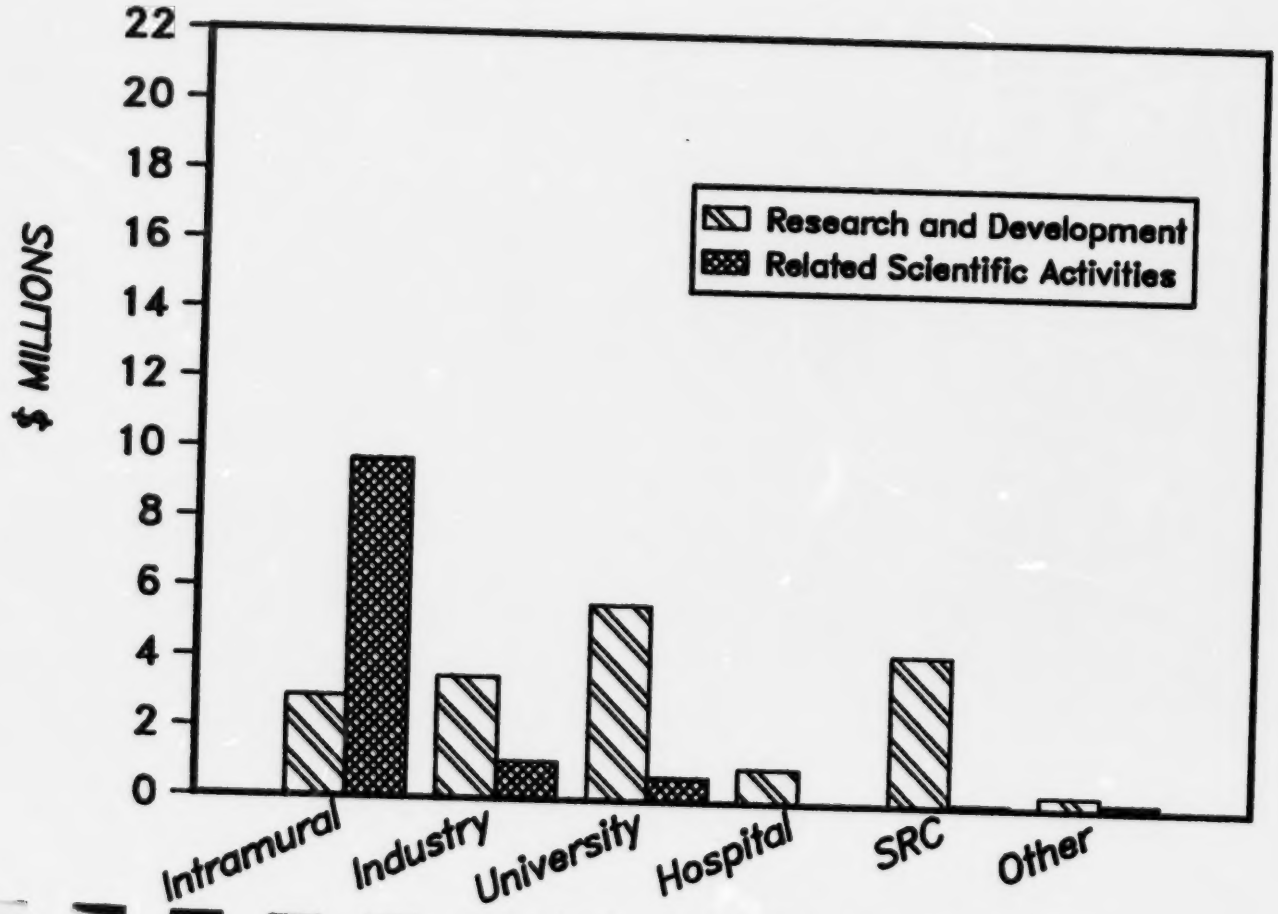
Total Expenditures on Natural Science Activities, by Sector of Performance and Activity, 1984–85



Government of Saskatchewan

TABLE 30. Total Expenditures in the Natural Sciences, by Department or Agency and Performer, 1984-85

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Agriculture	1,293	19	4,425	-	22	317	6,076
Cancer Foundation	407	-	-	-	-	-	407
Culture & Recreation	215	-	-	-	-	-	215
Energy & Mines	541	3,264	292	-	150	27	4,274
Environment	444	147	106	-	22	36	755
Health	5,144	-	593	886	-	-	6,623
Highways & Transportation	1,483	42	25	-	-	78	1,628
Parks & Renewable Resources	1,368	8	18	-	-	15	1,409
Rural Development*	46	151	-	-	-	-	197
Science & Technology	877	628	770	-	68	72	2,415
Supply & Services	300	137	3	-	-	-	440
Tourism & Small Business	20	-	10	-	32	-	62
Water Corporation	530	158	2	-	-	65	755
Vote 35	-	-	-	-	4,106	-	4,106
Total	**12,668**	**4,554**	**6,244**	**886**	**4,400**	**610**	**29,362**

(1) Includes only Provincial Government payments to the SRC.

Government of Saskatchewan

TABLE 31. Current Expenditures in the Natural Sciences, by Department or Agency and Activity, 1984-85

Department or Agency	Research & development	Education support	Technical surveys	Information services	Special services & studies	Museum services	Total
	($'000)						
Agriculture	4,989	-	233	811	11	-	6,044
Cancer Foundation	355	-	-	-	-	-	355
Culture & Recreation	24	-	-	4	-	178	206
Energy & Mines	3,378	-	448	6	442	-	4,274
Environment	55	-	533	12	155	-	755
Health	2,536	110	-	5	3,763	-	6,414
Highways & Transportation	225	-	817	263	323	-	1,628
Parks & Renewable Resources	621	-	759	-	29	-	1,409
Rural Development	-	-	-	-	197	-	197
Science & Technology	986	-	-	1,157	272	-	2,415
Supply & Services	70	-	110	110	110	-	400
Tourism & Small Business	-	-	-	-	62	-	62
Water Corporation	80	-	450	-	225	-	755
Vote 35	4,106	-	-	-	-	-	4,106
Total	**17,425**	**110**	**3,350**	**2,368**	**5,589**	**178**	**29,020**

Government of Saskatchewan

TABLE 32. Current Expenditures on R&D in the Natural Sciences, by Department or Agency and Performer, 1984-85

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Agriculture	215	10	4,425	-	22	317	4,989
Cancer Foundation	355	-	-	-	-	-	355
Culture & Recreation	24	-	-	-	-	-	24
Energy & Mines	176	2,895	157	-	150	-	3,378
Environment	-	-	55	-	-	-	55
Health	1,218	-	432	886	-	-	2,536
Highways & Transportation	152	-	22	-	-	51	225
Parks & Renewable Resources	583	8	18	-	-	12	621
Science & Technology	49	487	450	-	-	-	986
Supply & Services	50	17	3	-	-	-	70
Water Corporation	-	80	-	-	-	-	80
Vote 35	-	-	-	-	4,106	-	4,106
Total	**2,822**	**3,497**	**5,562**	**886**	**4,278**	**380**	**17,425**

(1) Includes only Provincial Government payments to the SRC.

Government of Saskatchewan

TABLE 33. Detail of Intramural Expenditures in the Natural Sciences, by Department or Agency and Expenditure, 1984-85

Department or Agency	Current expenditures		Capital expenditures	Total
	Personnel costs	Other costs		
	($'000)			
Agriculture	980	281	32	1,293
Cancer Foundation	309	46	52	407
Culture & Recreation	173	33	9	215
Energy & Mines	161	380	-	541
Environment	282	162	-	444
Health	3,536	1,399	209	5,144
Highways & Transportation	1,038	445	-	1,483
Parks & Renewable Resources	856	512	-	1,368
Rural Development	35	11	-	46
Science & Technology	647	230	-	877
Supply & Services	220	40	40	300
Tourism & Small Business	20	-	-	20
Water Corporation	500	30	-	530
Total	**8,757**	**3,569**	**342**	**12,668**

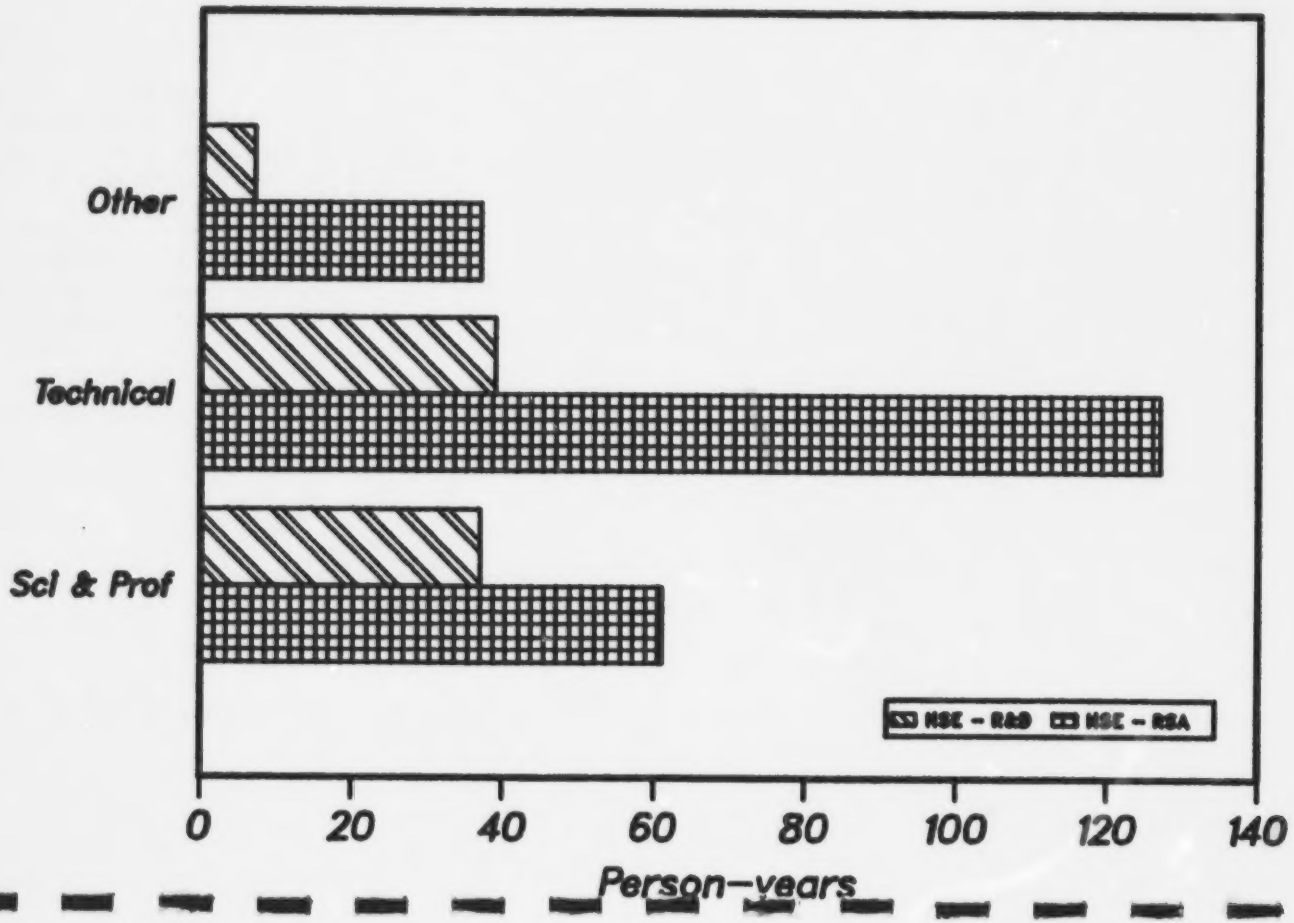
Government of Saskatchewan

TABLE 34. Departmental Personnel Engaged in Scientific Activities in the Natural Sciences, by Department or Agency, 1984-85

Department or Agency	Research & development				Related scientific activities			
	Scientific & professional	Technical	Other	Total	Scientific & professional	Technical	Other	Total
	(person-years)							
Agriculture	7	-	-	7	16	4	5	25
Cancer Foundation	-	14	-	14	-	-	-	-
Culture & Recreation	1	-	-	1	3	1	-	4
Energy & Mines	2	-	1	3	1	-	-	1
Environment	-	-	-	-	3	5	1	9
Health	14	17	2	33	12	56	21	89
Highways & Transportation	2	2	1	5	3	30	5	38
Parks & Renewable Resources	8	6	3	17	9	9	-	18
Rural Development	-	-	-	-	-	1	-	1
Science & Technology	2	-	-	2	8	-	5	13
Supply & Services	1	-	-	1	3	3	-	6
Tourism & Small Business	-	-	-	-	1	-	-	1
Water Corporation	-	-	-	-	2	18	-	20
Total	**37**	**39**	**7**	**83**	**61**	**127**	**37**	**225**

Figure 3. *Government of Saskatchewan*

Departmental Personnel Engaged In Intramural Natural Science Activities, By Activity and Category, 1984–85



Government of Saskatchewan

TABLE 35. Objectives of Expenditures in the Natural Sciences, by Department or Agency, 1984-85

Department or Agency	Advancement of science	Energy & fuels				Environmental issues			Health
		Conservation	Fossil fuels	Renewable Resources	Other	Land	Water	Other	
	($'000)								
Agriculture	-	-	-	-	-	-	-	-	-
Cancer Foundation	-	-	-	-	-	-	-	-	407
Culture & Recreation	24	-	-	-	-	-	-	-	-
Energy & Mines	-	94	3,690	41	-	-	-	-	-
Environment	-	-	-	-	-	-	-	732	-
Health	-	-	-	-	-	-	-	-	6,623
Highways & Transportation	-	-	-	-	-	-	-	-	-
Parks & Renewable Resources	-	-	-	-	-	-	132	550	-
Rural Development	-	-	-	-	-	-	-	-	-
Science & Technology	914	2	38	39	450	-	-	-	-
Supply & Services	-	-	-	-	-	10	-	-	-
Tourism & Small Business	-	-	-	-	-	-	-	-	-
Water Corporation	-	-	-	-	-	-	755	-	-
Vote 35	263	-	-	-	258	-	-	780	-
Total	**1,201**	**96**	**3,728**	**80**	**708**	**10**	**887**	**2,062**	**7,030**

Government of Saskatchewan

TABLE 35. Objectives of Expenditures in the Natural Sciences, by Department or Agency, 1984-85 - Continued

Department or Agency	Industrial & economic development					
	Agriculture	Fisheries	Forestry	Manufacturing	Minerals	Other
	($'000)					
Agriculture	6,076	-	-	-	-	-
Cancer Foundation	-	-	-	-	-	-
Culture & Recreation	-	-	-	-	-	-
Energy & Mines	-	-	-	-	449	-
Environment						
Health	-	-	-	-	-	-
Highways & Transportation	-	-	-	-	-	-
Parks & Renewable Resources	-	534	193	-	-	-
Rural Development	-	-	-	-	-	-
Science & Technology	123	-	-	849	-	-
Supply & Services	15	-	-	-	15	350
Tourism & Technology	26	36	-	-	-	-
Water Corporation	-	-	-	-	-	-
Vote 35	534	-	-	575	792	904
Total	**6,774**	**570**	**193**	**1,424**	**1,256**	**1,254**

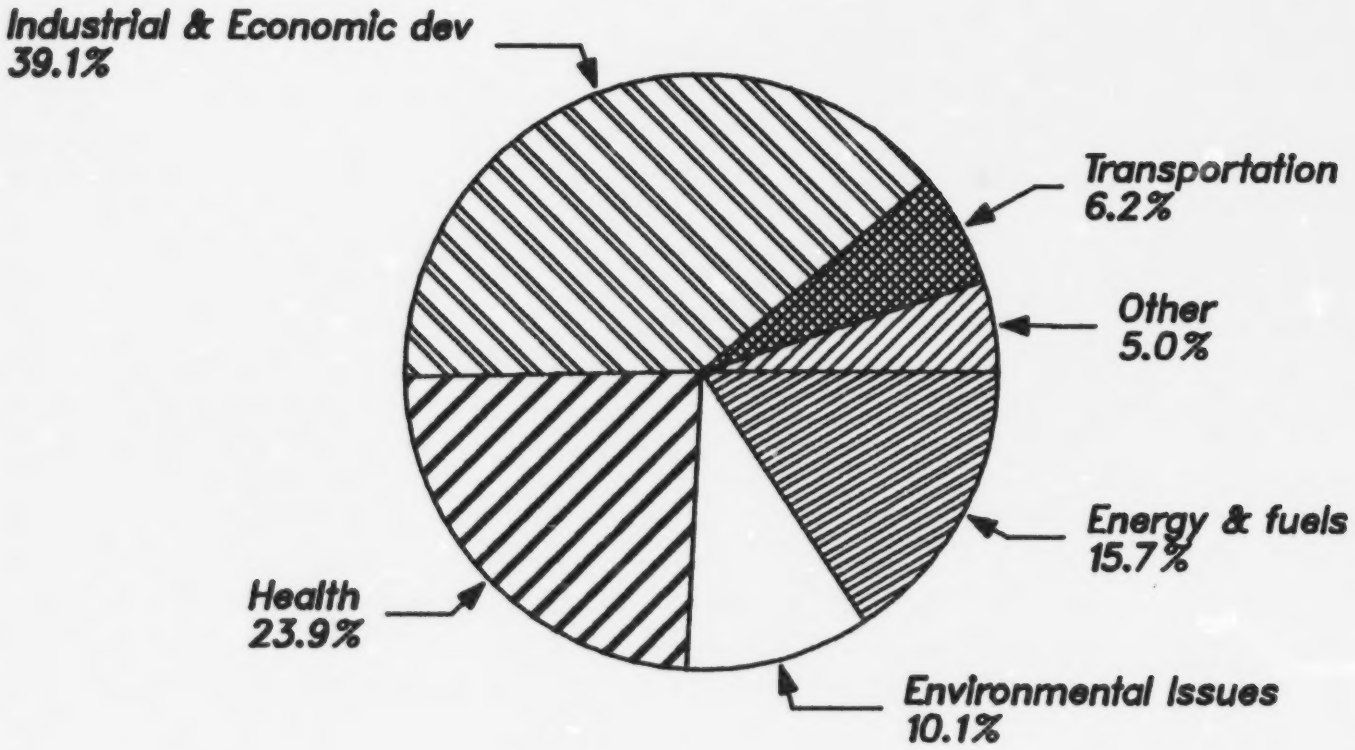
Government of Saskatchewan

TABLE 35. Objectives of Expenditures in the Natural Sciences, by Department or Agency, 1984-85 - Concluded

Department or Agency	Social development & related areas			
	Culture, sport & recreation	Urban & regional studies	Transportation	Total
	($'000)			
Agriculture	-	-	-	6,076
Cancer Foundation	-	-	-	407
Culture & Recreation	191	-	-	215
Energy & Mines	-	-	-	4,274
Environment	-	23	-	755
Health	-	-	-	6,623
Highways & Transportation..	-	-	1,628	1,628
Parks & Renewable Resources	-	-	-	1,409
Rural Development	-	-	197	197
Science & Technology	-	-	-	2,415
Supply & Services	-	40	10	440
Tourism & Small Business ..	-	-	-	62
Water Corporation	-	-	-	755
Vote 35	-	-	-	4,106
**Total ..... **	**191**	**63**	**1,835**	**29,362(1)**

Figure 4. *Government of Saskatchewan*

Objectives of Natural Science Expenditures, 1984–85



Government of Saskatchewan

TABLE 36. Objectives of Expenditures in the Natural Sciences, by Activity, 1984-85

Objective	Intramural		Extramural		Total
	Research & development	Related scientific activities	Research & development	Related scientific activities	
	($'000)				
Advancement of science	24	587	263	327	1,201
Energy & fuels:					
Conservation	-	15	-	81	96
Fossil fuels	176	32	3,202	318	3,728
Renewable Resources	-	7	-	73	80
Other.....	-	-	708	-	708
Environmental issues:					
Land	-	10	-	-	10
Water	-	662	80	145	887
Other	72	878	864	248	2,062
Health	1,698	3,853	1,318	161	7,030
Industrial & economic development:					
Agriculture	220	1,098	5,431	25	6,774
Fisheries	371	170	3	26	570
Forestry	140	47	6	-	193
Manufacturing	49	241	939	195	1,424
Minerals	5	321	729	138	1,256
Other	30	200	924	100	1,254
Social development & related areas:					
Culture, sport & recreation	-	191	-	-	191
Urban & regional studies	10	22	-	31	63
Transportation	152	1,387	73	223	1,835
**Total	**2,947**	**9,721**	**14,603**	**2,091**	**29,362**

Government of Saskatchewan

TABLE 37. Total Expenditures in the Natural Sciences, by Activity and Performer, 1985-86(e)

Activity	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Research & development:							
Current expenditures:							
In-house	2,078	...	...	...	...	...	2,078
Contracts	402	6,192	456	-	3,200	649	10,899
Grants(1)	740	110	6,234	348	4,196	30	11,658
Research fellowships	-	-	281	-	-	-	281
Sub-total	3,220	6,302	6,971	348	7,396	679	24,916
Capital expenditures	81	...	...	...	...	...	81
Related scientific activities:							
Current expenditures:							
Education support	-	-	120	-	-	-	120
Technical surveys	2,813	90	161	-	24	40	3,128
Information services	2,297	596	320	-	20	18	3,251
Special services & studies	4,628	1,711	290	-	30	296	6,955
Museum services	190	-	-	-	-	-	190
Sub-total	9,928	2,397	891	-	74	354	13,644
Capital expenditures	211	...	...	...	...	...	211
**Total	**13,440**	**8,699**	**7,862**	**348**	**7,470**	**1,033**	**38,852**

(1) Includes only Provincial Government payments to the SRC.

Government of Saskatchewan

TABLE 38. Total Expenditures in the Natural Sciences, by Department or Agency and Performer, 1985-86(e)

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Agriculture	1,323	3,610	4,864	-	15	279	10,091
Cancer Foundation	350	-	-	-	-	-	350
Culture & Recreation	226	-	-	-	-	-	226
Energy & Mines	711	1,562	518	-	3,205	-	5,996
Environment	449	161	116	-	24	40	790
Health	5,299	-	866	348	-	-	6,513
Highways & Transportation	1,480	43	30	-	-	600	2,153
Parks & Renewable Resources	1,103	-	24	-	-	-	1,127
Rural Development	50	155	-	-	-	-	205
Science & Technology	1,354	2,936	1,444	-	120	114	5,968
Supply & Services	325	132	-	-	-	-	457
Tourism & Small Business	20	-	-	-	25	-	45
Water Corporation	750	100	-	-	-	-	850
Vote 35	-	-	-	-	4,081	-	4,081
Total	**13,440**	**8,699**	**7,862**	**348**	**7,470**	**1,033**	**38,852**

(1) Includes only Provincial Government payments to the SRC.

Government of Saskatchewan

TABLE 39. Current Expenditures in the Natural Sciences, by Department or Agency and Activity, 1985-86(e)

Department or Agency	Research & development	Education support	Technical surveys	Information services	Special services & studies	Museum services	Total
	($'000)						
Agriculture	9,262	-	56	770	3	-	10,091
Cancer Foundation	300	-	-	-	-	-	300
Culture & Recreation	24	-	2	3	-	190	219
Energy & Mines	4,943	-	450	-	603	-	5,996
Environment	60	-	547	13	170	-	790
Health	2,327	120	-	-	3,855	-	6,302
Highways & Transportation .	578	-	815	260	500	-	2,153
Parks & Renewable Resources	546	-	548	-	33	-	1,127
Rural Development	-	-	-	-	201	-	201
Science & Technology	2,588	-	-	2,095	1,285	-	5,968
Supply & Services	107	-	110	110	110	-	437
Tourism & Small Business...	-	-	-	-	45	-	45
Water Corporation	100	-	600	-	150	-	850
Vote 35	4,081	-	-	-	-	-	4,081
**Total	**24,916**	**120**	**3,128**	**3,251**	**6,955**	**190**	**38,560**

Government of Saskatchewan

TABLE 40. Current Expenditures on R&D in the Natural Sciences, by Department or Agency and Performer, 1985-86(e)

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Agriculture	494	3,610	4,864	-	15	279	9,262
Cancer Foundation	300	-	-	-	-	-	300
Culture & Recreation	24	-	-	-	-	-	24
Energy & Mines	342	1,001	400	-	3,200	-	4,943
Environment	-	-	60	-	-	-	60
Health	1,233	-	746	348	-	-	2,327
Highways & Transportation	150	-	28	-	-	400	578
Parks & Renewable Resources ...	522	-	24	-	-	-	546
Science & Technology	60	1,579	849	-	100	-	2,588
Supply & Services	95	12	-	-	-	-	107
Water Corporation	-	100	-	-	-	-	100
Vote 35	-	-	-	-	4,081	-	4,081
**Total	**3,220**	**6,302**	**6,971**	**348**	**7,396**	**679**	**24,916**

(1) Includes only Provincial Government payments to the SRC.

Government of Saskatchewan

TABLE 41. Departmental Personnel Engaged in Scientific Activities in the Natural Sciences, by Department or Agency, 1985-86(e)

Department or Agency	Research & development				Related scientific activities			
	Scientific & professional	Technical	Other	Total	Scientific & professional	Technical	Other	Total
	(person-years)							
Agriculture	14	1	-	15	14	2	4	20
Cancer Foundation	-	8	-	8	-	-	-	-
Culture & Recreation	1	-	-	1	3	1	-	4
Energy & Mines	3	-	1	4	1	-	-	1
Environment	-	-	-	-	2	6	1	9
Health	15	17	2	34	11	56	21	88
Highways & Transportation .	2	2	1	5	3	30	5	38
Parks & Renewable Resources	8	4	3	15	5	6	-	11
Rural Development	-	-	-	-	-	1	-	1
Science & Technology	2	-	-	2	13	-	4	17
Supply & Services	1	-	-	1	1	1	4	17
Tourism & Small Business ..	-	-	-	-	1	-	-	1
Water Corporation	-	-	-	-	4	36	-	40
**Total ..... **	**46**	**32**	**7**	**85**	**58**	**139**	**35**	**232**

Government of Saskatchewan

TABLE 42. Objectives of Expenditures in the Natural Sciences, by Department or Agency, 1985-86(e)

Department or Agency	Advancement of science	Energy & fuels		Environmental issues		Health
		Fossil fuels	Other	Water	Other	
	($'000)					
Agriculture	-	-	-	-	-	-
Cancer Foundation	-	-	-	-	-	350
Culture & Recreation	24	-	-	-	-	-
Energy & Mines	-	5,546	-	-	-	-
Environment	-	-	-	-	765	-
Health	-	-	-	-	-	6,513
Highways & Transportation .	-	-	-	-	-	-
Parks & Renewable Resources	-	-	-	99	498	-
Rural Development	-	-	-	-	-	-
Science & Technology	1,524	-	-	-	-	-
Supply & Services	-	-	-	-	-	-
Tourism & Small Business ..	-	-	-	-	-	-
Water Corporation	-	-	-	850	-	-
Vote 35	261	-	257	-	775	-
**Total ..... **	**1,809**	**5,546**	**257**	**949**	**2,038**	**6,863**

Government of Saskatchewan

TABLE 42. Objectives of Expenditures in the Natural Sciences by Department or Agency, 1985-86(e) - Continued

Department or Agency	Industrial and economic development					
	Agriculture	Fisheries	Forestry	Manufacturing	Minerals	Other
	($'000)					
Agriculture	10,091	-	-	-	-	-
Cancer Foundation	-	-	-	-	-	-
Culture & Recreation	-	-	-	-	-	-
Energy & Mines	-	-	-	-	450	-
Environment	-	-	-	-	-	-
Health	-	-	-	-	-	-
Highways & Transportation	-	-	-	-	-	-
Parks & Renewable Resources	-	335	195	-	-	-
Rural Development	-	-	-	-	-	-
Science & Technology	200	-	-	4,244	-	-
Supply & Services	18	18	-	-	-	367
Tourism & Small Business	-	45	-	-	-	-
Water Corporation	-	-	-	-	-	-
Vote 35	531	-	-	572	787	898
Total	**10,840**	**398**	**195**	**4,816**	**1,237**	**1,265**

Government of Saskatchewan

TABLE 42. Objectives of Expenditures in the Natural Sciences by Department or Agency 1985-86(e) - Concluded

Department or Agency	Social development & related areas		Transportation	Total
	Culture, sport & recreation	Urban & regional studies		
	($'000)			
Agriculture	-	-	-	10,091
Cancer Foundation	-	-	-	350
Culture & Recreation	202	-	-	226
Energy & Mines	-	-	-	5,996
Environment	-	25	-	790
Health	-	-	-	6,513
Highways & Transportation	-	-	2,153	2,153
Parks & Renewable Resources	-	-	-	1,127
Rural Development	-	-	205	205
Science & Technology	-	-	-	5,968
Supply & Services	-	48	6	457
Tourism & Small Business	-	-	-	45
Water Corporation	-	-	-	850
Vote 35	-	-	-	4,081
Total	**202**	**73**	**2,364**	**38,852**

Social Sciences and Humanities

Government of Saskatchewan

TABLE 43. Total Expenditures in the Social Sciences and Humanities, by Activity, 1978-79 to 1985-86

Activity	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85(r)	1985-86(e)
	($'000)							
Research & development:								
Current expenditures:								
In-house	844	1,013	938	682	128	320	271	183
Contracts	11	58	316	330	117	255	107	110
Grants	-	-	987	275	219	207	298	262
Research fellowships	15	20	17	20	21	-		
Sub-total	870	1,091	2,258	1,307	485	782	676	555
Capital expenditures	-	1	8	-	-	-	42	27
Related scientific activities:								
Current expenditures	4,995	5,006	6,550	7,322	7,903	10,674	15,478	16,373
Capital expenditures	136	229	138	20	65	93	588	6
Total	**6,001**	**6,327**	**8,954**	**8,649**	**8,453**	**11,549**	**16,784**	**16,961**

Government of Saskatchewan

TABLE 44. Total Expenditures in the Social Sciences and Humanities, by Department or Agency 1978-79 to 1985-86

Department or Agency	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85(r)	1985-86(e)
	($'000)							
Advanced Education & Manpower	425	432	459	534	560	170	1,328	1,199
Agriculture	564	617	515	450	944	971	537	820
Archives Board	487	521	722	772	872	1,002	920	1,054
Assessment Authority	...	...	...	...	...	...	53	55
Consumer & Commercial Affairs	10	6	2	...	75	75	295	295
Co-operation & Co-op Dev't ..	323	443	529	168	...	219	224	221
Culture & Recreation	146	160	83	90	139	192	249	261
Economic Dev't & Trade	...	...	...	...	...	556	647	1,007
Education	101	61	177	149	197	158	200	320
Employment Dev't Agency	...	...	...	...	...	...	...	350
Executive Council	202	213	121	129	201	131	386	471
Finance	41	42	...	...	...	...	1,052	1,086
Health	1,507	1,711	2,686	1,947	1,699	2,665	2,685	2,468
Highway Traffic Board	120	50	178	97	127	90	84	83
Indian & Native Affairs Sec..	...	...	...	...	...	188	205	182
Industry & Commerce	340	282	243	423	390	...	...	...
Justice	...	...	...	...	...	1,295	1,495	1,500
Labour	458	458	458	655	694	675	212	142
Municipal Affairs	260	...	...	...	...	...	...	...
Northern Saskatchewan	...	...	...	175	...	...	...	...
Parks & Renewable Resources .	...	...	...	...	...	256	...	...
Public Service Commission ...	...	...	...	...	...	...	202	216
Revenue & Financial Services.	...	...	...	...	...	110	102	146
Rural Development	...	...	146	130	...	...	67	71
Saskatchewan Housing Corp ...	205	198	356	371	...	...	318	318
Saskatchewan Library	...	...	...	...	...	...	30	10
Science & Technology	...	...	...	...	...	12	62	70
Social Services	794	863	1,202	1,421	1,575	1,824	2,892	3,539
Supply & Services	...	...	...	...	...	420	1,514	80
Tourism & Renewable Resources	18	1	330	377	...	...	...	...
Tourism & Small Business	...	...	...	...	186	80	202	413
Urban Affairs	...	269	747	761	794	460	785	539
Women's Secretariat	...	...	...	...	...	...	38	45
Total	6,001	6,327	8,954	8,649	8,453	11,549	16,784	16,961

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TABLE 45. Total Expenditures in the Social Sciences and Humanities, by Performer, 1978-79 to 1985-86

Performer	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85(r)	1985-86(e)
	($'000)							
Intramural	5,125	5,665	6,679	6,226	6,618	8,947	11,431	10,385
Industry	649	502	951	1,251	914	1,230	3,112	4,178
Universities	151	160	59	468	321	654	788	908
Hospitals & health organizations	-	-	950	177	119	115	-	-
Saskatchewan Research Council(1).....	70	-	19	160	35	2	60	37
Other	6	-	296	367	446	601	1,393	1,453
Total	6,001	6,327	8,954	8,649	8,453	11,549	16,784	16,961

(1) Includes only Provincial Government payments to the SRC.

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TABLE 46. Current Expenditures on R&D in the Social Sciences and Humanities, by Department or Agency, 1978-79 to 1985-86

Department or Agency	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85(r)	1985-86(e)
	($'000)							
Advanced Education & Manpower	37	28	32	20	21	...	...	...
Agriculture	41	24	78	36	43	100	...	...
Archives Board	101	107	32	...	...	...	...	...
Consumer & Commercial Affairs	...	...	...	...	12	12	...	...
Co-operation & Co-op Dev't	...	60	104	...	...	...	...	...
Culture & Recreation	86	90	83	90	13	8	12	12
Education	...	...	...	...	...	...	...	...
Executive Council	64	67	61	65	134	65	181	186
Health	485	674	1,515	752	170	274	310	216
Highway Traffic Board	34	15	50	...	...	...	...	...
Parks & Renewable Resources	...	...	...	...	...	90	...	...
Sask Housing Corp.	...	...	...	44	...	...	...	...
Social Services	12	26	33	...	92	133	141	141
Supply & Services	...	...	...	...	...	100	32	...
Tourism & Renewable Resources	10	...	270	300	...	...	...	...
Total	**870**	**1,091**	**2,258**	**1,307**	**485**	**782**	**676**	**555**

Government of Saskatchewan

TABLE 47. Current Expenditures on R&D in the Social Sciences and Humanities, by Performer, 1978-79 to 1985-86

Performer	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85(r)	1985-86(e)
	($'000)							
Intramural	855	1,071	971	682	128	320	271	234
Industry	-	-	255	300	-	130	107	110
Universities	15	20	17	181	159	190	234	174
Hospitals & health organizations	-	-	950	114	119	107	-	-
Saskatchewan Research Council(1).....	-	-	-	-	-	-	37	37
Other	-	-	65	30	79	35	27	-
**Total	**870**	**1,091**	**2,258**	**1,307**	**485**	**782**	**676**	**555**

(1) Includes only Provincial Government payments to the SRC.

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TABLE 48. Departmental Personnel Engaged in Scientific Activities in the Social Sciences and Humanities, by Activity and by Category, 1978-79 to 1985-86

Activity and Category	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85(r)	1985-86(e)
	(person-years)							
Research & development:								
Scientific & professional ...	23	29	25	15	7	7	5	5
Technical	12	15	10	9	1	1	3	5
Other	2	5	5	4	-	-	1	1
Sub-total	37	49	40	28	8	8	9	11
Related scientific activities:								
Scientific & professional ...	92	86	93	99	106	132	154	149
Technical	19	19	15	11	14	23	12	15
Other	43	47	45	44	46	69	74	74
Sub-total	154	152	153	154	166	224	240	238
Total social science activities:								
Scientific & professional....	115	115	118	114	113	139	159	154
Technical	31	34	25	20	15	24	15	20
Other	45	52	50	48	46	69	75	75
**Total	**191**	**201**	**193**	**182**	**174**	**232**	**249**	**249**

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TABLE 49. Total Expenditures in the Social Sciences and Humanities, by Sources of Funds, 1984-85

Department or Agency	Departmental budget	Transfers from other departments	Transfers from federal government	From trust funds	From other sources	Total
	($'000)					
Advanced Education & Manpower ..	1,328	-	-	-	-	1,328
Agriculture	522	-	-	-	15	537
Archives Board	857	-	-	-	63	920
Assessment Authority	53	-	-	-	-	53
Consumer & Commercial Affairs ..	295	-	-	-	-	295
Co-operation & Co-op Dev't	224	-	-	-	-	224
Culture & Recreation	249	-	-	-	-	249
Economic Dev't & Trade	647	-	-	-	-	647
Education	200	-	-	-	-	200
Executive Council	383	-	3	-	-	386
Finance	1,052	-	-	-	-	1,052
Health	2,273	-	85	307	20	2,685
Highway Traffic Board	84	-	-	-	-	84
Indian & Native Affairs Secr't	205	-	-	-	-	205
Justice	1,248	-	247	-	-	1,495
Labour	212	-	-	-	-	212
Public Service Commission	202	-	-	-	-	202
Revenue & Financial Services ...	102	-	-	-	-	102
Rural Development	67	-	-	-	-	67
Saskatchewan Housing Corp.	318	-	-	-	-	318
Saskatchewan Library	30	-	-	-	-	30
Science & Technology	62	-	-	-	-	62
Social Services	2,892	-	-	-	-	2,892
Supply & Services	1,457	57	-	-	-	1,514
Tourism & Small Business	202	-	-	-	-	202
Urban Affairs	785	-	-	-	-	785
Women's Secretariat	38	-	-	-	-	38
**Total	**15,987**	**57**	**335**	**307**	**98**	**16,784**

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TABLE 50. Total Expenditures in the Social Sciences and Humanities, by Activity and Performer, 1984-85

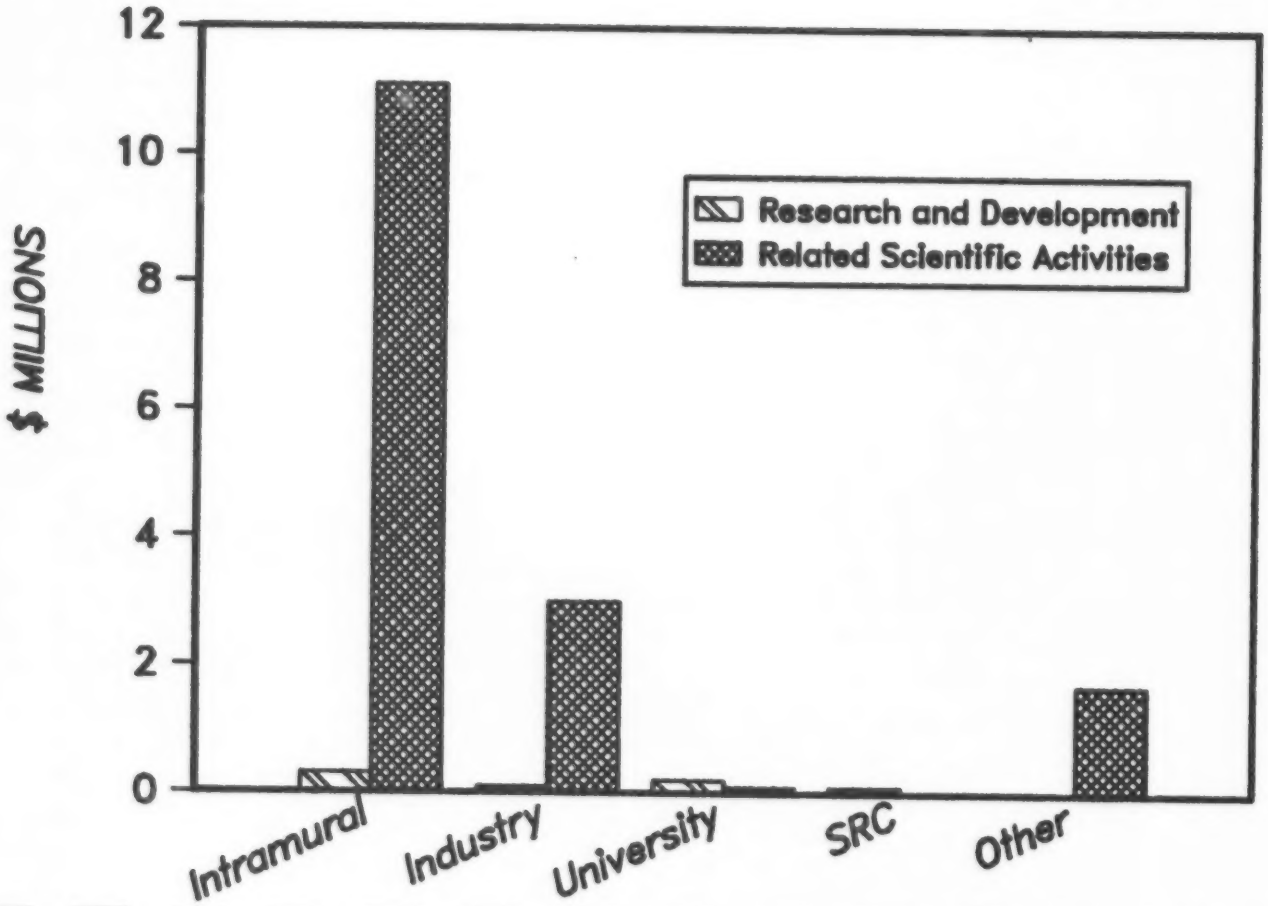
Activity	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Research and development:							
Current expenditures:							
In-house	271	...	...	...	...	...	271
Contracts	-	107	-	-	-	-	107
Grants	-	-	234	-	37	27	298
Research fellowships	-	-	-	-	-	-	-
Sub-total	271	107	234	-	37	27	676
Capital expenditures	42	...	...	...	...	...	42
Related scientific activities:							
Current expenditures	10,530	3,005	554	-	23	1,366	15,478
Capital expenditures	588	...	...	...	...	...	588
Total	**11,431**	**3,112**	**788**	-	**60**	**1,393**	**16,784**

(1) Includes only Provincial Government payments to the SRC.

Figure 5.

Government of Saskatchewan

Total Expenditures on Social Science Activities, by Sector of Performance and Activity, 1984–85



Government of Saskatchewan

TABLE 51. Total Expenditures in the Social Sciences and Humanities, by Department or Agency and Performer, 1984-85

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Tot
	($'000)						
Advanced Education & Manpower ..	451	-	-	-	-	877	1,328
Agriculture	313	56	98	-	-	70	537
Archives Board	920	-	-	-	-	-	920
Assessment Authority	53	-	-	-	-	-	53
Consumer & Commercial Affairs ..	295	-	-	-	-	-	295
Co-operation & Co-op Dev't	90	-	131	-	-	3	224
Culture & Recreation	234	5	-	-	-	10	249
Economic Dev't & Trade	114	533	-	-	-	-	647
Education	191	-	1	-	3	5	200
Executive Council	146	107	94	-	-	39	386
Finance	1,052	-	-	-	-	-	1,052
Health	2,316	-	342	-	-	27	2,685
Highway Traffic Board	84	-	-	-	-	-	84
Indian & Native Affairs Secr't..	40	85	-	-	-	80	205
Justice	1,495	-	-	-	-	-	1,495
Labour	212	-	-	-	-	-	212
Library	30	-	-	-	-	-	30
Public Service Commission	196	-	-	-	-	6	202
Revenue & Financial Services ...	62	40	-	-	-	-	102
Rural Development	67	-	-	-	-	-	67
Saskatchewan Housing Corp.	318	-	-	-	-	-	318
Science & Technology	62	-	-	-	-	-	62
Social Services	767	1,800	109	-	37	179	2,892
Supply & Services	1,419	-	-	-	20	75	1,514
Tourism & Small Business	40	152	-	-	-	10	202
Urban Affairs	426	334	13	-	-	12	785
Women's Secretariat	38	-	-	-	-	-	38
**Total	**11,431**	**3,112**	**788**	**-**	**60**	**1,393**	**16,784**

(1) Includes only Provincial Government payments to the SRC.

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TABLE 52. Current Expenditures in the Social Science and Humanities, by Department or Agency and Activity, 1984-85

Department or Agency	Research & development	Related scientific activities	Total
	($'000)		
Advanced Education & Manpower	-	1,328	1,328
Agriculture	-	537	537
Archives Board	-	882	882
Assessment Authority	-	53	53
Consumer & Commercial Affairs	-	295	295
Co-operation & Co-op Dev't	-	224	224
Culture & Recreation	12	237	249
Economic Dev't & Trade	-	647	647
Education	-	200	200
Executive Council	181	205	386
Finance	-	1,052	1,052
Health	310	2,333	2,643
Highway Traffic Board	-	84	84
Indian & Native Affairs Secr't	-	205	205
Justice	-	1,495	1,495
Labour	-	212	212
Public Service Commission	-	202	202
Revenue & Financial Services	-	102	102
Rural Development	-	67	67
Saskatchewan Housing Corp.	-	318	318
Saskatchewan Library	-	30	30
Science & Technology	-	62	62
Social Services	141	2,751	2,892
Supply & Services	32	932	964
Tourism & Small Business	-	202	202
Urban Affairs	-	785	785
Women's Secretariat	-	38	38
Total	**676**	**15,478**	**16,154**

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TABLE 53. Current Expenditures on R&D in the Social Sciences and Humanities, by Department or Agency and Performer, 1984-85

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Culture & Recreation	12	-	-	-	-	-	12
Executive Council	74	107	-	-	-	-	181
Health	153	-	130	-	-	27	310
Social Services	-	-	104	-	37	-	141
Supply & Services	32	-	-	-	-	-	32
**Total ..... **	**271**	**107**	**234**	**-**	**37**	**27**	**676**

(1) Includes only Provincial Government payments to the SRC.

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TABLE 54. Detail of Intramural Expenditures in the Social Sciences and Humanities, by Department or Agency and Expenditure, 1984-85

Department or Agency	Current expenditures		Capital	Total
	Personnel costs	Other costs		
	($'000)			
Advanced Education & Manpower ..	407	44	-	451
Agriculture	294	19	-	313
Archives Board	687	195	38	920
Assessment Authority	53	-	-	53
Consumer & Commercial Affairs ..	231	64	-	295
Co-operation & Co-op Dev't	90	-	-	90
Culture & Recreation	202	32	-	234
Economic Dev't & Trade	114	-	-	114
Education	170	21	-	191
Executive Council	106	40	-	146
Finance	873	179	-	1,052
Health	1,729	545	42	2,316
Highway Traffic Board	76	8	-	84
Indian & Native Affairs Secr't .	40	-	-	40
Justice	1,295	200	-	1,495
Labour	124	88	-	212
Public Service Commission	181	15	-	196
Revenue & Financial Services ...	62	-	-	62
Rural Development	67	-	-	67
Saskatchewan Housing Corp.	256	62	-	318
Saskatchewan Library	20	10	-	30
Science & Technology	56	6	-	62
Social Services	673	94	-	767
Supply & Services	869	-	550	1,419
Tourism & Small Business	40	-	-	40
Urban Affairs	401	25	-	426
Women's Secretariat	38	-	-	38
**Total	**9,154**	**1,647**	**630**	**11,431**

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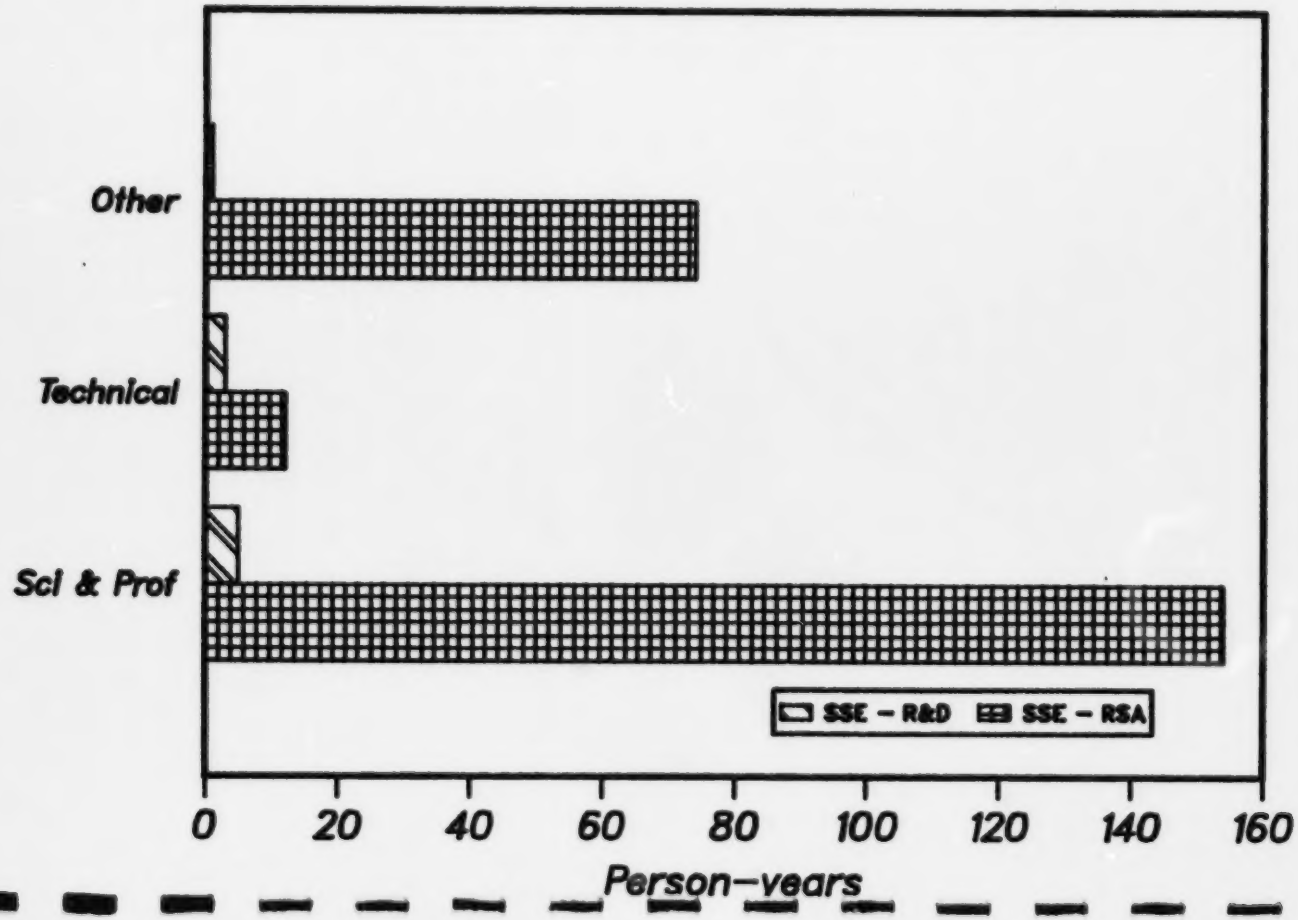
TABLE 55. Departmental Personnel Engaged in Scientific Activities in the Social Sciences and Humanities, by Department or Agency, 1984-85

Department or Agency	Research & development				Related scientific activities			
	Scientific & professional	Technical	Other	Total	Scientific & professional	Technical	Other	Total
	(person-years)							
Advanced Education & Manpower .	-	-	-	-	-	-	11	11
Agriculture	-	-	-	-	5	1	1	7
Archives Board	-	-	-	-	12	3	8	23
Assessment Authority	-	-	-	-	2	-	-	2
Consumer & Commercial Affairs .	-	-	-	-	4	-	-	4
Co-operation & Co-op Dev't	-	-	-	-	1	1	-	2
Culture & Recreation	-	-	-	-	4	3	-	7
Economic Dev't & Trade	-	-	-	-	4	-	-	4
Education	-	-	-	-	1	-	4	5
Executive Council	2	1	-	3	1	2	-	3
Finance	-	-	-	-	20	-	4	24
Health	2	2	1	5	20	2	31	53
Highway Traffic Board	-	-	-	-	2	-	-	2
Indian & Native Affairs Secr't.	-	-	-	-	1	-	-	1
Justice	-	-	-	-	18	-	10	28
Labour	-	-	-	-	4	-	1	5
Public Service Commission	-	-	-	-	4	-	-	4
Revenue & Financial Services...	-	-	-	-	2	-	-	2
Rural Development	-	-	-	-	2	-	-	2
Saskatchewan Housing Corp.	-	-	-	-	7	-	-	7
Saskatchewan Library	-	-	-	-	1	-	-	1
Science & Technology	-	-	-	-	1	-	1	2
Social Services	-	-	-	-	15	-	1	16
Supply & Services	1	-	-	1	15	-	2	17
Tourism & Small Business	-	-	-	-	1	-	-	1
Urban Affairs	-	-	-	-	6	-	-	6
Women's Secretariat	-	-	-	-	1	-	-	1
**Total	**5**	**3**	**1**	**9**	**154**	**12**	**74**	**240**

Figure 6. Government of Saskatchewan

Departmental Personnel Engaged In Intramural Social Science Activities, By Activity and Category, 1984–85



Government of Saskatchewan

TABLE 56. Objectives of Expenditures in the Social Sciences and Humanities, by Department or Agency, 1984-85

Department or Agency	Advancement of science	Communications	Health	Industrial & economic development			
				Agriculture	Manufacturing	Minerals	Other
	($'000)						
Advanced Education & Manpower ..	-	-	-	-	-	-	-
Agriculture	-	-	-	537	-	-	-
Archives Board	-	-	-	-	-	-	-
Assessment Authority	-	-	-	-	-	-	-
Consumer & Commercial Affairs ..	-	-	-	-	-	-	-
Co-operation & Co-op Dev't	-	-	-	20	-	-	20
Culture & Recreation	12	-	-	-	-	-	-
Economic Dev't & Trade	-	-	-	-	647	-	-
Education	-	-	-	-	-	-	-
Executive Council	146	-	-	34	-	30	77
Finance	-	-	-	-	-	-	-
Health	-	-	2,623	-	-	-	-
Highway Traffic Board	-	-	-	-	-	-	-
Indian & Native Affairs Secr't .	-	12	-	-	-	-	57
Justice	-	-	-	-	-	-	-
Labour	-	-	-	-	-	-	-
Public Service Commission	-	-	-	-	-	-	-
Revenue & Financial Services ...	-	-	-	-	-	-	-
Rural Development	-	-	-	-	-	-	-
Saskatchewan Housing Corp.	-	-	-	-	-	-	-
Saskatchewan Library	-	-	-	-	-	-	-
Science & Technology	62	-	-	-	-	-	-
Social Services	-	-	-	-	-	-	-
Supply & Services	-	-	-	-	-	-	-
Tourism & Small Business	-	-	-	-	-	-	202
Urban Affairs	-	-	-	-	-	-	-
Women's Secretariat	-	-	-	-	-	-	-
**Total	**220**	**12**	**2,764**	**591**	**647**	**30**	**356**

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TABLE 56. Objectives of Expenditures in the Social Sciences and Humanities, by Department or Agency, 1984-85 - Concluded

Department or Agency	Social development & related areas					Transportation	Other	Total
	Culture, sport & recreation	Education	Human resources	Urban & regional studies	Other			
	($'000)							
Advanced Education & Manpower ..	874	386	68	-	-	-	-	1,328
Agriculture	-	-	-	-	-	-	-	537
Archives Board	-	-	-	-	920	-	-	920
Assessment Authority	-	-	-	53	-	-	-	53
Consumer & Commercial Affairs ..	-	-	-	-	295	-	-	295
Co-operation & Co-op Dev't	-	-	144	-	40	-	-	224
Culture & Recreation	237	-	-	-	-	-	-	249
Economic Dev't & Trade	-	-	-	-	-	-	-	647
Education	-	200	-	-	-	-	-	200
Executive Council	-	-	-	60	-	-	39	386
Finance	-	-	-	-	-	-	1,052	1,052
Health	-	62	-	-	-	-	-	2,685
Highway Traffic Board	-	-	-	-	-	84	-	84
Indian & Native Affairs Secr't .	-	-	-	-	136	-	-	205
Justice	-	-	-	-	1,495	-	-	1,495
Labour	-	-	212	-	-	-	-	212
Public Service Commission	-	-	202	-	-	-	-	202
Revenue & Financial Services ...	-	-	73	-	29	-	-	102
Rural Development	-	-	-	67	-	-	-	67
Saskatchewan Housing Corp.	-	-	-	318	-	-	-	318
Saskatchewan Library	30	-	-	-	-	-	-	30
Science & Technology	-	-	-	-	-	-	-	62
Social Services	-	-	-	-	2,751	-	-	2,892
Supply & Services	-	-	-	-	-	-	1,514	1,514
Tourism & Small Business	-	-	-	-	-	-	-	202
Urban Affairs	-	-	-	785	-	-	-	785
Women's Secretariat	-	-	-	-	38	-	-	38
**Total	**1,141**	**648**	**699**	**1,283**	**5,704**	**84**	**2,605**	**16,784**

Figure 7. Government of Saskatchewan

Objectives of Social Science Expenditures, 1984–85

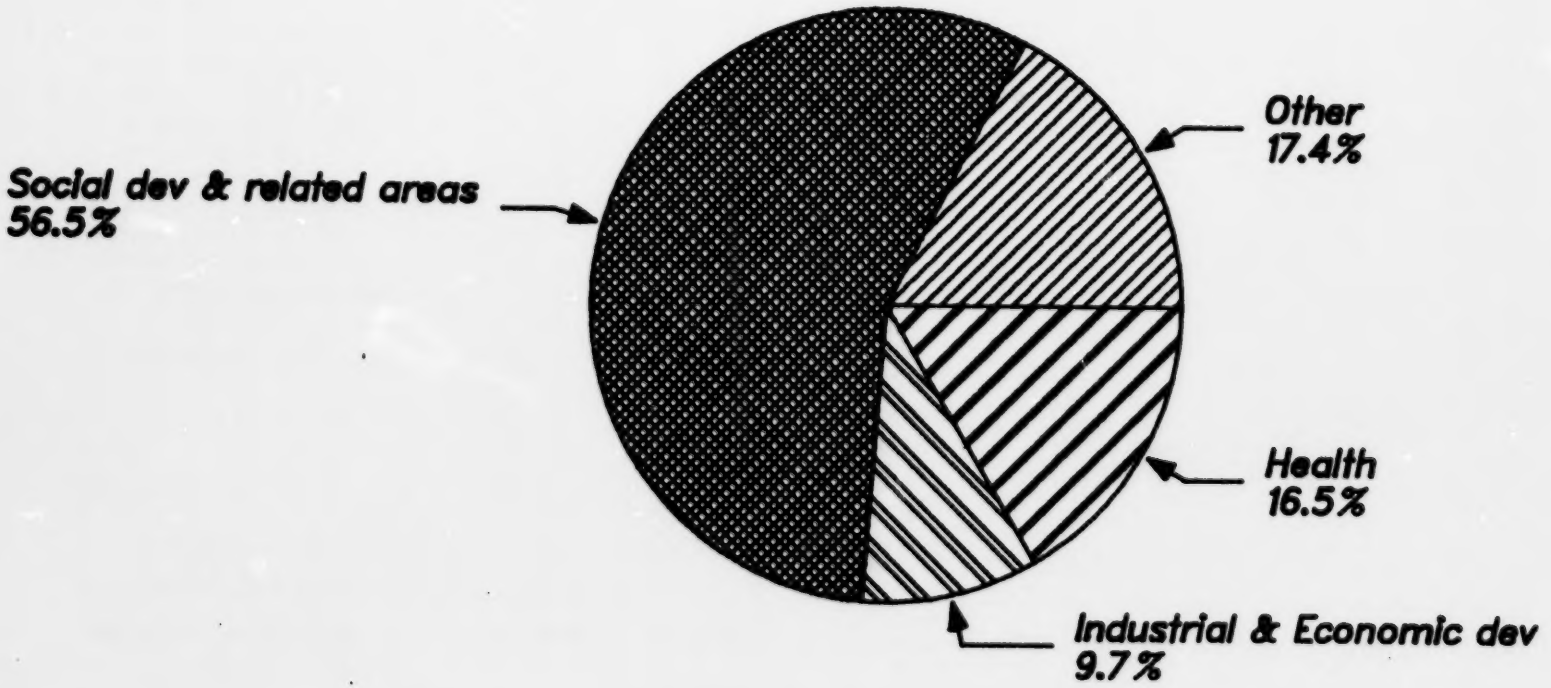

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TABLE 57. Objectives of Expenditures in the Social Sciences and Humanities, by Activity, 1984-85

Objective	Intramural		Extramural		Total
	Research & development	Related scientific activities	Research & development	Related scientific activities	
	($'000)				
Advancement of science	86	134	-	-	220
Communications	-	-	-	12	12
Health	195	2,121	298	150	2,764
Industrial & economic development:					
Agriculture	-	333	-	258	591
Manufacturing	-	114	-	533	647
Minerals	-	-	30	-	30
Other	-	60	77	219	356
Social development & related areas:					
Culture, sport & recreation	-	252	-	889	1,141
Education	-	574	-	74	648
Human resources	-	519	-	180	699
Urban & regional studies	-	864	-	419	1,283
Other	-	3,624	-	2,080	5,704
Transportation	-	84	-	-	84
Other	32	2,439	-	134	2,605
Total	**313**	**11,118**	**405**	**4,948**	**16,784**

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TABLE 58. Total Expenditures in the Social Sciences and Humanities, by Activity and Performer, 1985-86(e)

Activity	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Research and development:							
Current expenditures:							
In-house	183	...	...	...	...	...	183
Contracts	-	110	-	-	-	-	110
Grants	51	-	174	-	37	-	262
Research fellowships	-	-	-	-	-	-	-
Sub-total	234	110	174	-	37	-	555
Capital expenditures	27	...	...	...	...	...	27
Related scientific activities:							
Current expenditures	10,118	4,068	734	-	-	1,453	16,373
Capital expenditures	6	...	...	...	...	...	6
Total	**10,385**	**4,178**	**908**	-	**37**	**1,453**	**16,961**

(1) Includes only Provincial Government payments to the SRC.

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TABLE 59. Total Expenditures in the Social Sciences and Humanities, by Department or Agency and Performer, 1985-86(e)

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Advanced Education & Manpower ..	325	-	-	-	-	874	1,199
Agriculture	320	120	231	-	-	149	820
Archives Board	1,054	-	-	-	-	-	1,054
Assessment Authority	55	-	-	-	-	-	55
Consumer & Commercial Affairs ..	295	-	-	-	-	-	295
Co-operation & Co-op Dev't	85	-	136	-	-	-	221
Culture & Recreation	249	5	-	-	-	7	261
Economic Dev't & Trade	120	887	-	-	-	-	1,007
Education	190	-	50	-	-	80	320
Employment Dev't Agency	350	-	-	-	-	-	350
Executive Council	152	110	170	-	-	39	471
Finance	1,086	-	-	-	-	-	1,086
Health	2,256	-	212	-	-	-	2,468
Highway Traffic Board	83	-	-	-	-	-	83
Indian & Native Affairs Secr't .	-	102	-	-	-	80	182
Justice	1,500	-	-	-	-	-	1,500
Labour	142	-	-	-	-	-	142
Public Service Commission	211	-	-	-	-	5	216
Revenue & Financial Services ...	66	80	-	-	-	-	146
Rural Development	71	-	-	-	-	-	71
Saskatchewan Housing Corp.	318	-	-	-	-	-	318
Saskatchewan Library	10	-	-	-	-	-	10
Science & Technology	70	-	-	-	-	-	70
Social Services	801	2,400	109	-	37	192	3,539
Supply & Services	80	-	-	-	-	-	80
Tourism & Small Business	40	373	-	-	-	-	413
Urban Affairs	426	101	-	-	-	12	539
Women's Secretariat	30	-	-	-	-	15	45
**Total	**10,385**	**4,178**	**908**	-	**37**	**1,453**	**16,961**

(1) Includes only Provincial Government payments to the SRC.

Government of Saskatchewan

TABLE 61. Current Expenditures on R&D in the Social Sciences and Humanities, by Department or Agency and Performer, 1985-86(e)

Department or Agency	Intramural	Industry	Universities	Hospitals & health organizations	Saskatchewan Research Council(1)	Other	Total
	($'000)						
Culture & Recreation	12	-	-	-	-	-	12
Executive Council	76	110	-	-	-	-	186
Health	146	-	70	-	-	-	216
Social Services	-	-	104	-	37	-	141
**Total	**234**	**110**	**174**	-	**37**	-	**555**

(1) Includes only Provincial Government payments to the SRC.

TABLE 62. Departmental Personnel Engaged in Scientific Activities in the Social Sciences and Humanities, by Department or Agency, 1985-86(e)

Department or Agency	Research & development				Related scientific activities			
	Scientific & professional	Technical	Other	Total	Scientific & professional	Technical	Other	Total
	(person-years)							
Advanced Education & Manpower	-	-	-	-	-	-	8	8
Agriculture	-	-	-	-	5	1	1	7
Archives Board	-	-	-	-	13	4	11	28
Assessment Authority	-	-	-	-	2	-	-	2
Consumer & Commercial Affairs	-	-	-	-	4	-	-	4
Co-operation & Co-op Dev't	-	-	-	-	1	1	-	2
Culture & Recreation	1	-	-	1	4	3	-	7
Economic Dev't & Trade	-	-	-	-	4	-	-	4
Education	-	-	-	-	1	-	4	5
Employment Dev't Agency	-	-	-	-	6	-	1	7
Executive Council	2	1	-	3	1	2	-	3
Finance	-	-	-	-	9	-	4	23
Health	2	4	1	7	22	2	30	54
Highway Traffic Board	-	-	-	-	2	-	-	2
Indian & Native Affairs Secr't.	-	-	-	-	-	-	-	-
Justice	-	-	-	-	18	-	10	28
Labour	-	-	-	-	2	-	1	3
Public Service Commission	-	-	-	-	5	-	-	5
Revenue & Financial Services	-	-	-	-	2	-	-	2
Rural Development	-	-	-	-	2	-	-	2
Saskatchewan Housing Corp.	-	-	-	-	7	-	-	7
Saskatchewan Library	-	-	-	-	1	-	-	1
Science & Technology	-	-	-	-	1	-	1	2
Social Services	-	-	-	-	19	-	3	22
Supply & Services	-	-	-	-	-	2	-	2
Tourism & Small Business	-	-	-	-	1	-	-	1
Urban Affairs	-	-	-	-	6	-	-	6
Women's Secretariat	-	-	-	-	1	-	-	1
Total	5	5	1	11	149	15	74	238

Government of Saskatchewan

TABLE 63. Objectives of Expenditures in the Social Sciences and Humanities, by Department or Agency, 1985-86(e)

Department or Agency	Advancement of science	Health	Industrial & economic development			
			Agriculture	Manufacturing	Minerals	Other
	($'000)					
Advanced Education & Manpower ..	-	-	-	-	-	-
Agriculture	-	-	820	-	-	-
Archives Board	-	-	-	-	-	-
Assessment Authority	-	-	-	-	-	-
Consumer & Commercial Affairs ..	-	-	-	-	-	-
Co-operation & Co-op Dev't	-	-	10	-	-	10
Culture & Recreation	12	-	-	-	-	-
Economic Dev't & Trade	-	-	-	1,007	-	-
Education	-	-	-	-	-	-
Employment Dev't Agency	-	-	-	-	-	-
Executive Council	152	-	110	-	30	80
Finance	-	-	-	-	-	-
Health	-	2,406	-	-	-	-
Highway Traffic Board	-	-	-	-	-	-
Indian & Native Affairs Secr't .	-	-	-	-	-	102
Justice	-	-	-	-	-	-
Labour	-	-	-	-	-	-
Public Service Commission	-	-	-	-	-	-
Revenue & Financial Services ...	-	-	-	-	-	-
Rural Development	-	-	-	-	-	-
Saskatchewan Housing Corp.	-	-	-	-	-	-
Saskatchewan Library.....	-	-	-	-	-	-
Science & Technology	70	-	-	-	-	-
Social Services	-	141	-	-	-	-
Supply & Services	-	-	-	-	-	-
Tourism & Small Business	-	-	-	-	-	413
Urban Affairs	-	-	-	-	-	-
Women's Secretariat	-	-	-	-	-	-
**Total	**234**	**2,547**	**940**	**1,007**	**30**	**605**

Government of Saskatchewan

TABLE 63. Objectives of Expenditures in the Social Sciences and Humanities, by Department or Agency, 1985-86(e)-Concluded

Department or Agency	Social development & related areas					Transportation	Other	Total
	Culture, sport & recreation	Education	Human resources	Urban & regional studies	Other			
	($'000)							
Advanced Education & Manpower ..	874	309	16	-	-	-	-	1,199
Agriculture	-	-	-	-	-	-	-	820
Archives Board	-	-	-	-	1,054	-	-	1,054
Assessment Authority	-	-	-	55	-	-	-	55
Consumer & Commercial Affairs ..	-	-	-	-	295	-	-	295
Co-operation & Co-op Dev't	-	-	171	-	30	-	-	221
Culture & Recreation	249	-	-	-	-	-	-	261
Economic Dev't & Trade	-	-	-	-	-	-	-	1,007
Education	-	320	-	-	-	-	-	320
Employment Dev't Agency	-	-	350	-	-	-	-	350
Executive Council	-	-	-	60	-	-	39	471
Finance	-	-	-	-	-	-	1,086	1,086
Health	-	62	-	-	-	-	-	2,468
Highway Traffic Board	-	-	-	-	-	83	-	83
Indian & Native Affairs Secr't .	-	-	-	-	80	-	-	182
Justice	-	-	-	-	1,500	-	-	1,500
Labour	-	-	142	-	-	-	-	142
Public Service Commission	-	-	216	-	-	-	-	216
Revenue & Financial Services ...	-	-	113	-	33	-	-	146
Rural Development	-	-	-	71	-	-	-	71
Saskatchewan Housing Corp.	-	-	-	318	-	-	-	318
Saskatchewan Library	10	-	-	-	-	-	-	10
Science & Technology	-	-	-	-	-	-	-	70
Social Services	-	-	-	-	3,398	-	-	3,539
Supply & Services	-	-	-	-	-	-	80	80
Tourism & Small Business	-	-	-	-	-	-	-	413
Urban Affairs	-	-	-	539	-	-	-	539
Women's Secretariat	-	-	-	-	45	-	-	45
**Total	**1,133**	**691**	**1,008**	**1,043**	**6,435**	**83**	**1,205**	**16,961**

APPENDIX

DEFINITIONS

This report covers those scientific and technological activities which involve the generation, dissemination and application of new scientific and technological knowledge. The central activity is research and experimental development (R&D). In addition, there are a number of related scientific activities (RSA) which are considered in less detail.

R&D is creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society and the use of this stock of knowledge to devise new applications.

It requires the acquisition of knowledge and not just information. New knowledge involves the integration of newly acquired information into existing hypotheses, the formulation and testing of new hypotheses or the re-evaluation of existing observations.

The major **related scientific activities** are technical surveys, statistical surveys, information services, special services and studies, and museum services. Statistical surveys, information services and museum services are largely self-explanatory.

Technical surveys are activities directed towards the exploration and systematic description of the earth and its natural resources. The activities include the gathering, processing, collating and analyzing of data on natural phenomena except when part of a research project of a museum service. The preparation of maps and survey reports, their printing and cataloguing, are also included.

Special services and studies in the natural sciences are activities directed towards the establishment of national and provincial standards for materials, devices, products and processes; the calibration of secondary standards; non-routine quality testing; feasibility studies and demonstration projects. In the social sciences, special services and studies are systematic investigations carried out in order to provide information needed for planning or policy formulation, including feasibility studies and demonstration projects.

DEFINITIONS - Concluded

Activities are either natural sciences or social sciences and humanities. **Natural sciences** consist of disciplines concerned with the understanding, exploring, developing or utilizing the natural world. Included are the engineering, mathematical, environmental, life and physical sciences. **Social sciences and humanities** include all disciplines involving the study of human actions and conditions and the social, economic and institutional mechanisms affecting humans. Included are such disciplines as anthropology, business administration and commerce, communications, criminology, demography, economics, geography, history, languages, literature and linguistics, law, library science, philosophy, political science, psychology, religious studies, social work, sociology and urban and regional studies.

Five **performing sectors** are identified besides the Saskatchewan Research Council. Intramural refers to the provincial department or agency performing a scientific activity. Industry is largely private corporations but also includes crown corporations with a commercial function (e.g., power utilities) and industrial research institutes not controlled by another institution. Universities cover post secondary educational institutions and affiliated teaching and research facilities. Hospitals and health organizations are health organizations such as the Heart Foundation and hospitals which do not belong to the universities sector. Other includes non-resident performers of scientific activities funded by the provincial government, as well as recipients not covered elsewhere such as the Federal Government, other provincial departments and individuals.

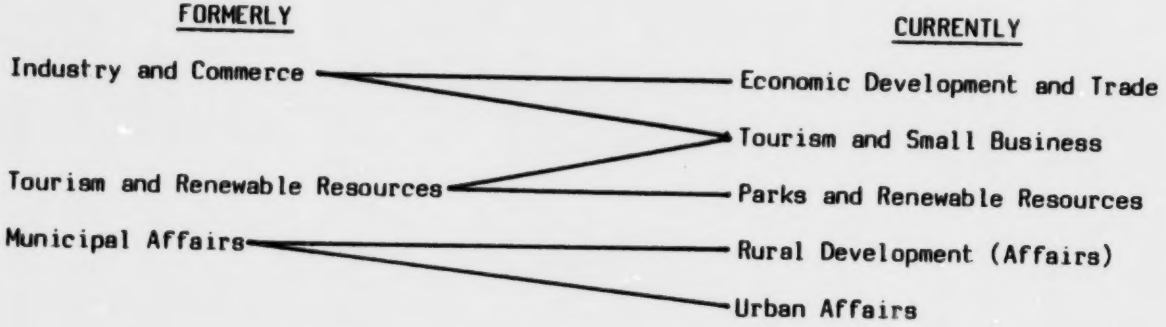
Expenditures are either **current** or **capital.** Current expenditures include those costs for personnel, transportation and communications, information, professional and special services, rentals, purchased repair and upkeep, utilities, materials and supplies. Capital expenditures are those on the construction and acquisition of land, buildings, machinery and equipment. Total expenditures include current plus capital.

THE RESPONDENTS

NOTE: The 1982 Saskatchewan provincial election resulted in a number of changes in departments. Where only the name of department was changed the new name is shown on historical tables. Departments which fall into this category are:

FORMERLY	CURRENTLY
Continuing Education	Advanced Education and Manpower
Consumer Affairs	Consumer and Commercial Affairs
Culture and Youth	Culture and Recreation
Mineral Resources	Energy and Mines
Rural Affairs	Rural Development

Other departments were reorganized in 1982. Mandates changed or were combined and/or shifted to newly created departments. These departments are shown historically under both the old and new names:



On historical tables the Executive Council includes the Bureau of Statistics and Intergovernmental Affairs. The Alcoholism Commission, the Medical Care Insurance Commission and the Health Research Board are included with Health in historical tables.

RESPONDENTS - Continued

Advanced Education and Manpower: Co-ordinator - Bill Wheatley 787-5608
The Planning and Evaluation Division reports on the labour force requirements and associated training strategies for Saskatchewan. An annual survey of Technical-Vocational Graduates is undertaken by the Labour Market Planning and Information Branch.

Agriculture: Co-ordinator - Brenda Machin 787-5139
Five branches are included in this department's submission: Soils and Crops, Extension Services, Livestock, Irrigation and Evaluation. In addition to performing both R&D and RSA intramurally, the department grants over $3.9 million for R&D to the University of Saskatchewan in support of the University Farmlab Work Program.

Archives Board: Co-ordinator - Ian Wilson 787-4066
The Archives Board reports the total budget supporting RSA in the social sciences.

Assessement Authority: Co-ordinator - Henry Schappert 787-2657
The Research and Standards Branch conducts policy research related to property assessment issues.

Cancer Foundation: Co-ordinator - R.J. Meldrum 585-1831
R&D is performed by the Physics and Medical Services units of the Foundation. Activities are related to the development of improvements in cancer treatment.

Consumer and Commercial Affairs: Co-ordinator - David Stuewe 787-3895
The Planning and Policy Branch supports mainly RSA in the social sciences. Some projects are analysing the impact of rent regulations, research on industry self regulation and self administration, and research on the food industry.

Co-operation & Co-operative Development: Co-ordinator - Carmen Dybwad 787-5378
Development of legislation, regulations, manuals and models for co-operatives and feasibility studies are undertaken by this department. They also provide financial support to the University of Saskatchewan Co-operative studies program.

Culture and Recreation: Co-ordinator - David Baron 787-5378
The Life and Earth Science sectors of the Museum of Natural History represent the natural science expenditures of this department. In the social sciences, the report includes expenditures of the Archaeology National unit of the Museum and the Heritage Resources Branch. Collections acquisition, preparation, documentation, maintenance, exhibit planning, analysis and publication are some of the activities the department is involved in.

RESPONDENTS - Continued

Economic Development & Trade: Co-ordinator - Barry Gunther 787-7838
Included in the Policy and Planning Branch's related scientific activities are: assessments and recommendations on applications to the Foreign Investment Review Agency, analysis of the economic impact of major industrial project proposals, management of extramural studies, development and maintenance of information systems, and development of publications identifying industrial opportunities.

Education: Co-ordinator - Bob Arkell 787-6057
Three divisions within the department are engaged in RSA: Policy, Planning and Special Projects Division, Development Division, and the Regional Services Division. They support research activities by providing consultative assistance and policy monitoring, public opinion surveys, the construction of standardized testing instruments, the design of research studies and distribution of research reports. Substantial efforts were directed towards supporting the Minister's Steering Group to obtain opinion about a curriculum report.

Employment Development Agency: Co-ordinator - Kevin Costante 787-9476
In 1985-86 the agency will be involved with policy and economic analysis of job creation programs.

Energy and Mines: Co-ordinator - Jim Hutchinson 787-3375
This department is the largest performer of scientific activities in the Government of Saskatchewan. Funding for scientific activities is split almost equally between the Federal Department of Energy, Mines and Resources, the Saskatchewan Heritage Fund and the department. The Heavy Oil Agreement, the Renewable Resources Agreement and the Heavy Oil/Fossil Fuels Program are the activities which the Federal Government supports. Saskatchewan Oil and Gas Corporation is the major performer of extramural R&D.

Environment: Co-ordinator - Betty McGregor 787-6139
Branches involved in scientific activities within this department are: Environmental Assessment, Air Pollution Control, Land Protection, Water Pollution Control, Environmental Co-ordination and Hydrology. Activities include the chemistry of summer precipitation in northern Saskatchewan, lake sensitivity to acidic deposition, literature searches, hydrology studies, hydraulic studies, water quality surveys, preparation of environmental guidelines and a regional flood frequency study.

Executive Council: Co-ordinator - name not available.
The Executive Council reports expenditures on both R&D and RSA in the social sciences. Projects include on-going research and improved development of the Economic Accounts, improving the methodology and publication of population projections, developing Retail Trade statistics for small areas of the province, and the collection and dissemination of statistical data.

Finance: Co-ordinator - Michael Shaw 787-6739
Intramural research activities centre around economic analysis and policy research related to resource allocation, taxation and investment.

RESPONDENTS - Continued

Health: Co-ordinator - L. Slater 787-3156
Included in this report are: Saskatchewan Prescription Drug Plan, Ambulance Services Unit, Psychiatric Services Branch, Policy Research and Management Services Branch, Vital Statistics Division, Provincial Laboratory, Community Health Services Branch, Medical Care Insurance Commission, Alcoholism Commission and the Health Research Board. Seventy-one percent of the expenditures are in the natural science and 68% percent of total science expenditure is for related scientific activities. Intramural activities account for 80% of the total expenditure.

Highways and Transportation: Co-ordinator - A.T. Horosko 787-4781
Six branches: Technical Research, Materials Testing, Traffic Safety, Planning, Transporation Systems and Geotechnical support natural science activities such as lab and field testing of materials and soils, geotechnical studies, payment performance, test track studies, traffic accident analyses etc.

Highway Traffic Board: Co-ordinator - R. Paragg 787-4054
The Legislative Review and Rate Unit, the Co-ordination and Research Unit, Safety Services the Operations Review Unit, and the Compliance Branch are units performing RSA in the social sciences.

Indian & Native Affairs Secretariat: Co-ordinator - H. Danchilla 787-6264
The secretariat funds related scientific activities in the social sciences. Their principal activity involves the constitutional amendment of Aboriginal Rights.

Justice: Co-ordinator - Dr. John Hylton 787-7869
Senior Administration and the Policy, Planning and Evaluation Branch are extensively involved in program planning, policy development and program evaluation of related scientific activities in the social sciences. The Department makes a substantial contribution to the development and maintenance of specialized libraries for use by professional departmental staff.

Labour: Co-ordinator - Ruth Drope 787-2419
The Policy Planning & Research Branch reports RSA in the social sciences. Activities include analysis and monitoring of provincial collective bargaining agreements, an annual survey of wages, salaries, fringe benefits and working conditions; a survey of minimum wage earners in Saskatchewan.

RESPONDENTS - Continued

Parks and Renewable Resources: Co-ordinator - N. Cherney 787-2884
Four branches, Fisheries, Forestry, Wildlife and Construction report in the natural sciences. Ninety-seven percent of the activities are performed by departmental personnel.

Public Service Commission: Co-ordinator - Donna Krawetz 787-7557
Six branches and the Resource Centre Library report Related Scientific Activities in the social sciences. The library specializes in books, reports, journals, etc. related to human resource management.

Revenue & Financial Services: Co-ordinator - Bill Van Sickle 787-6530
The Policy and Research Branch is involved in the political, financial and administrative implications of changes to the various taxes and programs administered by the department. The Public Employees Benefit Agency researches, analyzes and reports on the implications of changes to the various pension and benefits plans administered by the department.

Rural Development: Co-ordinator - Walter Antonio 787-2720
The Planning and Research Branch conducted studies for rural municipal financing, organized hamlet report, and an inter-departmental committee report on transportation for the elderly.

Saskatchewan Housing Corporation: Co-ordinator - Robert Hersche 787-6544
The Research Department conducts surveys on public housing, rents and the rental market; examines housing costs and affordability; and analyzes the housing market.

Saskatchewan Library: Co-ordinator - Stan Skrzeszewski 787-3006
The professional Services Branch and the Technical Services Branch activities include the production of bibliographies, research aides, and studies relating to improving or automating library services.

Science & Technology: Co-ordinator - Deborah DesRivieres 787-5782
Activities of the Provincial Co-ordination Unit in the social sciences include: Statistical surveys, information services and special services and studies. In the natural sciences departmental activities include: information collection and dissemination, industrial counselling, policy formulation, administration of R&D incentive grants and contracts statistical survey and special services and studies.

THE RESPONDENTS - CONCLUDED

Social Services: Co-ordinator - Martin Spigelman 787-3621
Most activities in this department are RSA and 73% are performed outside the department. Intramural activities include: preparatory work for new Family Services Act and Young Offenders Act, development of Automated Client Index and Automated Saskatchewan Assistance Plan, research into family violence to develop programs, a study on welfare reform and program evaluation.

Supply & Services: Co-ordinator - Kevan Taylor 787-2107
In the natural sciences the Central Survey and Mapping Agency includes 3 branches with R&D and RSA: Surveys Branch, Mapping Branch and Data Management Branch. Management Services, Government Systems Centre and Purchasing Agency reports RSA activity in the social sciences. Eighty-eight percent of their science activities are performed by department personnel.

Tourism and Small Business: Co-ordinator - Peter Wyse 787-9549
Two private consulting firms carried out a number of surveys in the social science areas. In the natural sciences the Saskatchewan Research Council and the University sector performed special services and studies relating to Agriculture and Fisheries application for the department.

Urban Affairs: Co-ordinator - Denis Exner 787-2675
Municipal Finance Branch, Municipal Advisory Services Branch and Community Planning Branch report RSA in the social sciences. Almost one half of the scientific activities are conducted intramurally with industries, universities and the other sector performing the remainder.

Water Corporation: Co-ordinator - Pearl Anderson 787-9529
Intramurally Watershed Management conducts technical surveys and analysis of soil relating to water seepage from canals. The Resource Management unit is involved in hydrology studies.

Women's Secretariat: Co-ordinator - Leah Siebold 787-7401
The Policy Analysis and Co-ordination Unit is concerned with women's issues.

INDICATORS OF PROVINCIAL SCIENTIFIC ACTIVITIES

1. Population and Income

Province	Population January/85(1)		Personal income per capita 1983(2)		Provincial Gross Domestic Product per capita 1983(3)	
	(000)	Rank	($)	Rank	($)	Rank
Newfoundland	579	9	9,179	10	9,402	10
Prince Edward Island	127	10	10,056	8	9,433	9
Nova Scotia	878	7	10,889	7	10,738	7
New Brunswick	717	8	10,040	9	10,248	8
Quebec	6,562	2	12,531	6	13,781	6
Ontario	9,024	1	14,784	1	16,805	2
Manitoba	1,065	5	12,603	5	14,130	5
Saskatchewan	1,016	6	12,686	4	16,025	4
Alberta.....	2,338	4	14,652	2	24,183	1
British Columbia	2,883	3	14,339	3	16,385	3
Canada(4)	25,262		13,541		15,917	

(1) **Canadian Statistical Review,** Statistics Canada, Catalogue No. 11-003E, June 1985.
(2) **National Income and Expenditure Accounts, 1969-1983,** Statistics Canada, Catalogue No. 13-201.
(3) **Provincial Economic Accounts, Experimental Data, 1968-1983,** Statistics Canada, Catalogue No. 13-213.
(4) Includes the Yukon and Northwest Territories.

INDICATORS OF PROVINCIAL SCIENTIFIC ACTIVITIES

2. Universities

Province	Graduate students per ten thousand population (15 years and over) 1983-84(1)		Sponsored research in universities per capita, 1983-84(2)	
		Rank	$	Rank
Newfoundland	15	7	24	6
Prince Edward Island	-	10	3	10
Nova Scotia	29	4	27	5
New Brunswick	13	9	16	9
Quebec	32	1	28	4
Ontario	30	2	33	2
Manitoba	30	3	33	3
Saskatchewan	14	8	21	8
Alberta	25	5	36	1
British Columbia	22	6	22	7
Canada	27		29	

(1) Full-time enrolment for graduate degrees, per ten thousand population (15 years and over) **Universities Enrolment and Degrees, 1983-84**, Statistics Canada, Catalogue No. 81-204, and "Postcensal Estimate of Population by Sex and Age for Canada and the Provinces", June 1983, Population Estimates Section, Demography Division, Statistics Canada.

(2) **Financial Statistics of Universities and Colleges, 1983-84**, Canadian Association of University Business Officers.

INDICATORS OF PROVINCIAL SCIENTIFIC ACTIVITIES

3. Industry

Province	Value added by manufacturing activity per capita, 1982(1)		Current intramural industrial R&D expenditures per employee in primary and secondary industry, 1983(2)	
	($)	Rank	($)	Rank
Newfoundland	970	8	27	9
Prince Edward Island.....	615	10	--	10
Nova Scotia	1,392	6	83	7
New Brunswick	1,390	7	54	8
Quebec	2,975	2	637	2
Ontario	4,225	1	923	1
Manitoba	1,812	4	142	6
Saskatchewan	798	9	163	5
Alberta	1,688	5	518	3
British Columbia	2,121	3	359	4
Canada(3)	2,903		649	

(1) **Manufacturing Industries of Canada; National and Provincial Areas, 1982,** Statistics Canada, Catalogue No.31-203.

(2) Results of 1983 Industrial R&D survey, Science and Technology Statistics Section, Statistics Canada and **The Labour Force, May, 1985,** Statistics Canada, Catalogue No. 71-001.

(3) Includes the Yukon and Northwest Territories.

INDICATORS OF PROVINCIAL SCIENTIFIC ACTIVITIES

4. Federal Government

Province	Expenditures on intramural natural science activities 1983-84(1)	Federal personnel 1983-84(1)	Contracts awarded by the Science Procurement Sector, Department of Supply and Services, 1984-85(2)	
	($'000,000)	(Person-years)	Number	($'000,000)
Newfoundland	55	326	146	6
Prince Edward Island	6	110	28	1
Nova Scotia	126	1,828	403	12
New Brunswick	24	412	131	6
Quebec	120(3)	1,690(3)	507	59
Ontario	245(4)	4,507(4)	1,556	114
Ottawa-Hull	669	11,408	...	...
Manitoba	120	1,682	159	8
Saskatchewan	41	718	120	9
Alberta	76	1,388	312	22
British Columbia	126	1,833	950	49
Canada(5)	**1,608**	**25,908**	**4,352**	**287**

(1) "Federal Scientific Establishments, 1983-84", Science and Technology Statistics Section, Statistics Canada.
(2) **Research and Development Bulletin**, April 1985, Supply and Services.
(3) Excluding Hull.
(4) Excluding Ottawa.
(5) Includes the Yukon and Northwest Territories.

INDICATORS OF PROVINCIAL SCIENTIFIC ACTIVITIES

5. Provincial Research Organizations

Province	Total expenditures on science and technology, 1984(1)	
	($ '000)	Rank
Nova Scotia	6,178	7
New Brunswick	5,894	8
Quebec	23,815	2
Ontario	23,686	3
Manitoba	6,647	6
Saskatchewan	**10,849**	**4**
Alberta	39,116	1
British Columbia	8,493	5
Total	**124,678**	

(1) "The Provincial Research Organizations, 1984", **Science Statistics**, Vol. 9, No. 11, Statistics Canada, Catalogue No. 88-001.

INDICATORS OF PROVINCIAL SCIENTIFIC ACTIVITIES

6. Gross Domestic Expenditures on Natural Sciences and Engineering R&D in Canada, by Performing Sector, by Region, 1983(1)

Province	Federal government	Provincial government	Provincial research organization	Total government	Industry	University	Private non-profit	All sectors
	($000,000)							
Newfoundland	48	1	-	49	3	18	-	70
Prince Edward Island ..	6	-	-	6	-	1	-	7
Nova Scotia	87	1	2	90	13	33	1	137
New Brunswick	19	2	2	23	6	15	-	44
Quebec	124	21	10	155	561	214	20	950
Ontario	604	43	11	658	1,533	377	30	2,598
Manitoba	105	1	2	108	22	51	4	185
Saskatchewan	35	3	5	43	35	32	-	110
Alberta	65	27	24	116	195	129	1	441
British Columbia	77	12	3	92	141	88	3	324
Canada(2)	1,171	111	59	1,341	2,518	958	59	4,876

(1) "Estimates of Canadian R&D Expenditures, by Region, 1980-1983", Science and Technology Statistics Section, Statistics Canada.
(2) Includes the Yukon and Northwest Territories.
Note: Totals may not add due to rounding.

INDICATORS OF PROVINCIAL SCIENTIFIC ACTIVITIES

7. Gross Domestic Expenditures on Natural Sciences and Engineering R&D in Canada, by Funding Sector, by Region, 1983(1)

Province	Federal government	Provincial government	Provincial research organization	Total government	Industry	University	Private non-profit	All sectors(3)
	($000,000)							
Newfoundland	55	1	-	56	4	7	3	70
Prince Edward Island	6	-	-	6	-	1	-	7
Nova Scotia	106	2	-	108	12	12	3	137
New Brunswick	28	3	-	31	7	4	2	44
Quebec	289	78	1	368	435	39	37	950
Ontario	934	87	-	1,021	1,267	110	68	2,598
Manitoba	131	5	-	136	16	21	7	185
**Saskatchewan ..... **	**57**	**11**	-	**68**	**29**	**11**	-	**110**
Alberta	110	94	-	204	165	58	8	441
British Columbia	136	22	-	158	118	28	13	324
**Canada(2) ..... **	**1,852**	**303**	**1**	**2,156**	**2,064**	**291**	**141**	**4,876**

(1) **"Estimates of Canadian R&D Expenditures, by Region, 1980-1983"**, Science and Technology Statistics Section, Statistics Canada.
(2) Includes the Yukon and Northwest Territories.
(3) Includes Foreign sources of funds.
Note: Totals may not add due to rounding.

INDICATORS OF PROVINCIAL SCIENTIFIC ACTIVITIES

8. Gross Domestic Expenditures on Natural Sciences and Engineering R&D in Saskatchewan 1983(1)

Funding Sector	Performing sector							
	Government				Business enterprise	Higher education	Private non-profit	Total
	Federal	Provincial	SRC	Total				
	($000,000)							
Governments								
Federal	35	-	2	37	3	17	-	57
Provincial	-	3	2	5	2	4	-	11
SRC	-	-	-	-	-	-	-	-
Sub-total	35	3	4	42	5	21	1	68
Business enterprise	-	-	1	1	28	-	-	29
Higher education	-	-	-	-	-	11	-	11
Private non-profit	-	-	-	-	-	-	-	-
Foreign	-	-	-	-	2	-	-	2
Total	35	3	5	43	35	32	-	110

(1) "Estimates of Canadian R&D Expenditures, by Region, 1980-1983", Science and Technology Statistics Section, Statistics Canada.

Note: Totals may not add due to rounding.

Provincial Co-ordinators

Six provincial governments sponsored the Science and Technology Statistics Section in the collection of similar scientific activity data. Below is a list of co-ordinators for the various sponsoring departments/ministries.

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Co-ordinator - Science & Technology
Science & Technology Secretariat
Department of Commerce & Development
P.O. Box 6000
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Mr. G. Stokell
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University Relations Branch
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and Communications
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Statistics for the province of Quebec are provided by:

M. B. Girard
Responsible des A.S.T.
Ministère de l'Enseignement supérieur, de la Science et de la Technologie
875 Grand-Allée
Edifice "H", 2e étage
Québec, Québec
G1R 4Y8 Tel.: (418) 643-3008

Since the last issue of this report a re-organization within Statistics Canada has resulted in the amalgamation of the Science and Technology Statistics Section with elements of another Division. The Science and Technology Statistics Program is now one of the major responsibilities of the new Science, Technology and Capital Stock Division. The basic mission of the Program is to assure the availability of pertinent statistical information in support of the development of science and technology in Canada.

Activities of the Section are described in a semi-annual report distributed free of charge entitled **Activities of the Science and Technology Statistics Program.** This report is published in June and December each year.

Information is disseminated in a series of reports including monthly service bulletins, annual reports and occasional background papers which are described below.

Catalogued

88-001 Science Statistics
88-201 Science and Technology Indicators, 1984
88-202 Industrial Research and Development Statistics, 1982
88-203 Resources for Research and Development in Canada, 1983
88-204E Federal Scientific Activities, 1985-86
88-205E Directory of Industrial Research and Development Facilities in Canada, 1985.
88-206E Directory of Federal Government Scientific & Technological Establishments, 1985.
88-501E An Indicator of Excellence in Canadian Science
88-502E International Payments and Receipts for Technology
88-503E Technology and Commodity Trade
88-504E Patents as Indicators of Invention
88-505E Industrial Productivity and Research and Development Indicators
88-506E A Framework for Measuring Research and Development Expenditures in Canada
88-507E An Indicator of Excellence in Canadian Science: Summary Report

Uncatalogued

Estimates of Canadian Research and Development Expenditures, by Region, 1980-1983.

Estimation of R&D Expenditures in the Higher Education Sector, 1983-84.

Technology and Trade Statistics: Part 1

PROVINCIAL GOVERNMENT ACTIVITIES

IN THE

NATURAL SCIENCES

QUESTIONNAIRE AND GUIDE

FISCAL YEAR 1984-85

Si vous préférez ce questionnaire en français, veuillez cocher ☐

Ministry/Department or Agency	Reporting Unit	
Coordinator	**Mailing Address**	**Telephone No.**
Enquiries to be directed to	**Telephone No.**	**Date**

5-4600-120.1: 18-1-85 TB/CT – REG. B101536

INTRODUCTION

This questionnaire covers natural science activities funded by the provincial government. It includes expenditure and personnel data for research and development (R&D) and related scientific activities. All departments and agencies known to be conducting or funding activities in the natural sciences are included.

The classifications used in this questionnaire will not necessarily correspond to existing accounting systems or organizational units. Accurate data, therefore, depend on the good will and intelligent judgement of the responding officers. Information is required which describes the characteristics and magnitude of the department's activities; it is not a matter of decimal precision of data.

The data collected provide useful information for the development and analysis of provincial science policy. These statistics are also included with data collected from other sectors to provide national aggregates published by Statistics Canada. Data are released only with the approval of the provincial government.

This questionnaire includes only scientific activities in the natural sciences and technology.

Natural sciences and technology include the following disciplines:

Life sciences	- medical and biological
Physical sciences	- chemistry, physics and astronomy
Environmental sciences	- geology, oceanography and the study of the atmosphere
Engineering sciences	- architecture, civil engineering, etc.
Mathematical sciences	

If departmental scientific activities involve natural science disciplines, complete this questionnaire.

The social sciences and humanities include such disciplines as:

Anthropology	Law
Business administration and commerce	Library science
Communications	Philosophy
Criminology	Political science
Demography	Psychology
Economics	Religious studies
Geography	Social work
History	Sociology
Languages, literature and linguistics	Urban and regional studies

If departmental scientific activities involve these disciplines, complete the separate questionnaire on activities in the social sciences and humanities.

In many instances, particularly in health fields, it will be difficult to distinguish between the natural and social sciences. In such instances, however, some allocation must be made. Respondents should consider the main orientation of the projects involved and the field of training of the personnel in determining this allocation. Any measure which reflects the actual situation is acceptable.

Scientific Activities

The activities which concern us are those scientific and technological (S&T) activities which involve the generation, dissemination and initial application of new scientific and technological knowledge. The central activity is research and experimental development (R&D). In addition, there are a number of activities closely related to R&D. Included in this survey are: education support, technical surveys, information services, special services and studies, and museum services.

Research and Experimental Development

Research and experimental development (R&D) is defined as creative work undertaken on a systematic basis to increase the stock of scientific and technical knowledge and to use this knowledge in new applications.

The central characteristic of R&D is an appreciable element of novelty and of uncertainty. *New* knowledge, products or processes are sought. The work is normally performed by, or under the supervision of, persons with post-graduate degrees in the natural sciences or engineering.

R&D is generally carried out by specialized R&D units. However, an R&D project may also involve the use of non-R&D facilities (e.g. testing grounds), the purchase or construction of specialized equipment and materials, and the assistance of other units. Costs of such items, attributable to the project, are to be considered R&D costs.

R&D units may also be engaged in non-R&D activities such as technical advisory services, testing, and construction of special equipment for other units. So far as it is practical, the effort devoted to such operations should be excluded from R&D.

On the other hand, R&D may be carried out by units normally engaged in other functions (e.g. a marine survey ship used for hydrological research, a geological survey team directed to work in a certain area in order to provide data for a geophysical research project). Such effort is part of an R&D project and, again so far as is practical, the costs should be assigned to R&D expenditures.

Examples:

1. The development of new methods of identifying tree species and checking their condition is R&D; the use of recently developed methods, such as remote sensing and infra-red photography, as part of normal forestry surveys, is not.

2. The operation of a new transportation system as a demonstration project is not R&D; however the *creation* of the system as a *prototype* and the evaluation of its operations should be considered R&D.

3. Grants to provide equipment for an R&D laboratory are to be considered R&D; grants to provide the same equipment primarily for teaching or medical care should not be considered R&D.

Related Scientific Activities

Education support - grants to individuals or institutions which are intended to support the post secondary education of students in technology and the natural sciences. General operating or capital grants are excluded. Grants intended primarily to support the research of individuals at universities are either R&D grants or research fellowships.

Technical surveys - activities directed towards the exploration and systematic description of the earth and its natural resources.

The activities which make up technical surveys include the gathering, processing, collating and analyzing of data on natural phenomena except when part of a research project or a museum service. The preparation of maps and survey reports, their printing and cataloguing, are also included.

Typical technical surveys are regular geological, hydrographic, and topographic surveys; routine astronomic observations; establishment and maintenance of meteorological records; soil, plant, fisheries, and wildlife surveys; routine soil and water tests; and monitoring of radioactivity levels.

Information services - all work directed to recording, classifying, translating, and disseminating scientific and technological information. Included are the operations of scientific and technical libraries, the publication of scientific journals and bibliographies, and the organizing of scientific conferences. Grants for the publication of scholarly works are also included.

General purpose information services or information services directed primarily toward the general public are excluded, as are general departmental and public libraries. When individual budgets exist, the costs of libraries which belong to institutions otherwise entirely classified to another activity, such as R&D or Technical surveys, should be assigned to Information services. Information advisory and consultancy services for Industry and Agriculture are part of Information services. The costs of printing and distributing reports from activities such as Technical surveys or R&D are attributable to those activities.

Special services and studies - work directed towards the establishment of national and provincial standards for materials, devices, products and processes; the calibration of secondary standards; non-routine quality testing; feasibility studies and demonstration projects.

Feasibility studies are technical investigations of proposed engineering projects to provide additional information required to reach decisions on implementation. Demonstration projects involve the operation of scaled-up versions of a facility or process, or prototypes, after the R&D is completed, to provide additional data on factors such as costs, operational characteristics, market demand and public acceptance. Projects called "demonstration projects" but which conform to the definition of R&D should be considered R&D. Once a facility or process is operated primarily to provide a service or to gain revenue, rather than as a demonstration, it should no longer be considered in Special services and studies. In all demonstration projects, only the *net* costs should be considered.

Museum services - comprise the collecting, cataloguing, and displaying of specimens of the natural world or of representations of natural phenomena. The scientific activities of natural history museums, zoological and botanical gardens, acquaria, planitaria, and nature reserves are included.

The activity represents a systematic attempt to preserve and display items from the natural world; in some ways it could be considered an extension of information services. Parks which are not primarily restricted reserves for certain fauna or flora are not included. In all cases the costs of providing entertainment and recreation to visitors should be excluded (e.g. restaurants, children's gardens, and nurseries).

If practical, resources of such institutions devoted to other activities, such as R&D or Information services, should be excluded from Museum services and assigned to those activities.

When a museum covers not only natural history but also aspects of human cultural activities, the museum's resources should be prorated between the natural and the social sciences. However, museums of science and technology, which display man-made objects and also may illustrate the operations of scientific "laws", should be considered in Museum services in the social sciences and humanities.

A. UNITS OF DEPARTMENT WHICH CARRIED OUT SCIENTIFIC ACTIVITIES (p.vii)

List those units (section/division/branch/station/group) of the department which carry out scientific activities and check the appropriate activities. If most of the units of a larger organization are engaged in the same activity, only the larger unit need be identified.

The list should help you to ensure that all the activities of the department are considered and that smaller units are not overlooked. It will also assist the data users to better understand the nature of the various scientific activities performed and could serve as a starting point for users requiring more information on some aspect of the the department's activities.

B. MAJOR PAYMENTS FOR SCIENTIFIC ACTIVITIES (p. viii)

Enter the name and city of each recipient of a major payment (≥$25,000) and enter the payment in the appropriate activity column. Both grants and contracts are included.

The information provided here will assist you to complete Question 1, the "key" question in the survey. It will also be used by Statistics Canada to ensure that major external performers of scientific activities are included in surveys of the other sectors.

Replies to this question will be treated as confidential by both Statistics Canada and the provincial government.

1. PERFORMERS OF SCIENTIFIC ACTIVITIES (p. 1 and 4)

Performers

Intramural - the reporting department. The scientific work is normally carried out by personnel assigned to the department and usually in facilities of the department. Also included are the administration of extramural programs, the costs of acquiring land, buildings and equipment to be used in scientific activities, and contracts to provide services required for scientific projects (e.g. rental of aircraft, computer services).

Industry - Canadian business and government enterprises. Include public utilities and government-owned firms as well as non-profit institutions and associations mainly serving industry and not controlled by another institution (e.g. Pulp & Paper Research Institute). Consultants providing scientific and engineering services are also included. Industrial research institutes affiliated with a university belong in the Universities sector.

Universities - Canadian universities and affiliated institutes owned, administered or staffed by them (e.g. Atlantic Industrial Research Institute of Nova Scotia Technical College). Teaching facilities in non-university hospitals are included.

Hospitals and health organizations - Canadian hospitals and health organizations which are not part of university medical schools.

Provincial research organizations - The Nova Scotia Research Council, the New Brunswick Research and Productivity Council, le Centre de recherche industrielle du Québec, the Ontario Research Foundation, the Manitoba Research Council, the Saskatchewan Research Council, the Alberta Research Council, and the Research Council of British Columbia.

Other - the federal government, other provincial government departments, municipal governments, individuals and institutions not identified with any other sector, and foreign performers.

Activities - the activities of R&D, education support, technical surveys, information services, special services and studies, and museum services have been defined above. These activities are further classified by type of expenditure.

Current expenditures - expenditures on items such as personnel, transportation and communications, information, professional and special services, rentals, purchased repair and upkeep, utilities, materials and supplies. Current expenditures for R&D are divided as follows:

In-house R&D - R&D performed by personnel of the reporting department. It may include R&D carried out on behalf of another department and covered by a transfer of funds, as well as services provided by other organizations (e.g. computing, transportation).

R&D contracts - payments to other organizations to carry out R&D intended to directly benefit the reporting department. The administration of R&D contracts is an intramural cost.

R&D grants and contributions - payments to other organizations (or individuals) for R&D intended basically to benefit the recipient of the grant. Contributions and loans should be considered as grants. The administration of R&D grants and contributions is an intramural cost

Research fellowships - payments to individuals for advanced research training and experience. The aim of the program should be research training rather than education.

Capital expenditures - expenditures on the construction and acquisition of land, buildings, machinery, and equipment.

2. SOURCES OF FUNDS FOR SCIENTIFIC ACTIVITIES (p. 1)

This question identifies the sources of funds for the total expenditures on scientific activities reported in Question 1. It will help to ensure that work funded from outside the department is not overlooked.

From departmental budget - that portion of the total departmental budget which was spent on natural science activities.

From other departments - money transferred from another provincial department to this one for activities in the natural sciences. Include when applicable, provincial portions of any federal-provincial cost sharing programs and identify the program.

From the Federal government - all funds from the federal government used for natural science activities. The funds are referred to as payments, contributions, transfers, etc. Also include federal portions of any federal-provincial cost sharing programs and identify the program.

From trust funds - all funds from trust funds used for natural science activities.

From other sources - all funds for natural science activities from sources not specified above such as reserve funds, revenues from sales or fees.

3. DEPARTMENTAL PERSONNEL ENGAGED IN SCIENTIFIC ACTIVITIES (p. 2 and 4)

The categories used to classify personnel will generally correspond to those used by the provincial government. The definitions given below indicate the training and educational level generally required for such categories. In all cases, however, consider the job classification, not the person's qualifications, because there will be some employees who exceed the qualifications required by the job (e.g. a person with a degree in a technical or clerical position).

Scientific and professional - people in jobs that require at least one academic degree or nationally recognized professional qualification (e.g. chartered accountant - C.A.) as well as those with equivalent experience.

Technical - people in jobs that require specialized vocational or technical training beyond the secondary level (e.g. community colleges and technical institutes) as well as those with experience equivalent to this training.

Other - clerical, secretarial, administrative, operational and other support personnel.

Data are requested by activity and category of employment in person-years or full-time equivalent. Persons engaged only in a scientific activity are considered one person-year. Those working part-time only on scientific activities are considered as a fraction corresponding to their involvement. Include both permanent and non-permanent employees.

Care should be taken to ensure that the personnel data reported are consistent with the expenditure data. This is the most common reason for questioning the validity of a return. It is suggested that respondents check this by dividing the reported total person-years into the intramural personnel costs reported in Question 4 to determine if the cost per person is a reasonable figure.

4. DETAIL OF INTRAMURAL EXPENDITURES (p. 2)

These data are useful for intra-departmental comparisons, for construction of constant dollar expenditures series, and for editing the question on personnel.

Some work is considered intramural although it is actually performed outside the department. This is because the performer supplies a service or good, the provision of which it would not consider a scientific activity. Examples are computing services purchased from another government department or the private sector, materials and supplies for the department's scientific activities, rental of accommodation or transportation. All non-capital expenditures of this nature are to be considered "other costs", even if the personnel costs portion of such purchases are known. "Personnel costs" are to be used only for the departmental personnel reported in the preceding question.

5. OBJECTIVES OF EXPENDITURES ON SCIENTIFIC ACTIVITIES (p. 3 and 5)

The objectives listed are not mutually exclusive, nor do they represent the total range of possible objectives. They are, however, intended to cover the major areas of current economic, political and technological interest. This list is common to both the social and natural sciences.

Report expenditures under the objective which is primary to that expenditure. Generally, the objective selected should be consistent with the stated objectives of the reporting department.

Advancement of science – activities for the development of general scientific knowledge (e.g. general R&D grants to universities or support of fields such as astronomy and archaeology).

Communications – activities in support of the development and regulation of communication services, including telecommunications.

Energy and fuels:

Conservation – activities directed towards the conservation of energy (e.g. domestic and commercial buildings, vehicles and other transportation systems, industrial processes, etc.).

Fossil fuels – activities concerned with the exploration, extraction, refining and use of crude oils, natural gas and coal.

Hydro electric energy – activities directed towards the generation and use of hydro electric power.

Renewable resources – activities directed towards the exploration or use of solar, biomass, hydraulic, geothermal or peat energy.

Other (specify) – any other activities not covered by those listed above.

Environmental issues – activities aimed at preserving or restoring environmental quality, including scientific work on pollution but excluding medical aspects. For example, R&D on diseases caused by pollution should be reported under the health objective. Those activities dealing with air, land and water should be reported separately.

Health – activities related to the maintenance and improvement of the physical well-being of the population.

Industrial and economic development:

Agriculture – activities which support the agricultural industry.

Fisheries – activities which support the fishing industry.

Forestry – activities which support the forestry industry.

Manufacturing – measures intended to achieve efficient and sustained growth in manufacturing industries, and the encouragement of the production of new goods and services.

Minerals – activities related to the location, extraction, processing, use and conservation of mineral resources (except fuels).

Other (specify) – any objectives not covered by those listed above.

Social development:

Culture, sport and recreation - activities related to the support and development of culture, physical fitness, sport and recreation. Include wilderness recreation and conservation of fauna and flora.

Education - education support, grants for education research, activities in support of education policy.

Human resources - activities directed towards the development and utilization of the labour force. Labour relations, personnel policy and training programs, demographic and immigration studies are included.

Urban and regional studies - studies directed towards understanding communities and improving life within the urban and rural community.

Other (specify) - other activities directed towards social well-being (e.g. administration of justice consumer protection).

Transportation - activities in support of the development and regulation of transportation services.

Other (specify) - any objectives not covered by those listed above.

Province _____

Ministry/Department _____

A. UNITS OF DEPARTMENT WHICH CARRIED OUT SCIENTIFIC ACTIVITIES, 1984-85 (Instructions – Page iii)

Unit	R&D	Education support	Technical surveys	Information services	Special services and studies	Museum services
				(√)		

DESCRIPTION OF INTRAMURAL ACTIVITIES

Briefly describe the intramural scientific activities of the reporting department. Describe major current projects rather than overall programs. Attach any relevant material (papers, annual reports, etc.) which provide descriptions of departmental activities.

Province _____

Ministry/Department _____

B. MAJOR PAYMENTS FOR SCIENTIFIC ACTIVITIES, 1984-85 (Instructions – Page iii)

Recipient	R&D	Education support	Technical surveys	Information services	Special services and studies	Museum services
	$000					

DESCRIPTION OF EXTRAMURAL ACTIVITIES

Briefly describe extramural projects, or programs, and identify the sectors in which they are conducted. If descriptive material or lists of projects are available they may be submitted in lieu of completing this question.

Province _____

Ministry/Department _____

1. PERFORMERS OF SCIENTIFIC ACTIVITIES, 1984-85 (Instructions – Page iii)

Scientific activity	Intramural activities	Payments to: Industry	Universities	Hospitals & health organizations	Provincial research organizations	Other	Total 1984-85
	$000						
Research and experimental development (R&D):							
Current expenditures:							
1. In-house R&D							
2. R&D contracts							
3. R&D grants and contributions							
4. Research fellowships							
5. Sub-total (1 + 2 + 3 + 4)							
6. Capital expenditures							
Related scientific activities (RSA):							
Current expenditures:							
7. Education support							
8. Technical surveys							
9. Information services							
10. Special services and studies							
11. Museum services							
12. Capital expenditures							
13. TOTAL EXPENDITURES							

2. SOURCES OF FUNDS FOR SCIENTIFIC ACTIVITIES, 1984-85 (Instructions – Page iv)

	$000
1. From departmental budget	
2. From other departments	
3. From federal government (specify source)	
4. From trust funds	
5. From other sources (reserve funds, revenues from sales or fees)	
6. TOTAL EXPENDITURES	

Province _____

Ministry/Department _____

3. DEPARTMENTAL PERSONNEL ENGAGED IN SCIENTIFIC ACTIVITIES, 1984-85 (Instructions – Page iv)

Type of personnel	R&D	Related scientific activities	Total 1984-85
	Person-years		
1. Scientific and professional			
2. Technical			
3. Other			
4. TOTAL PERSONNEL			

4. DETAIL OF INTRAMURAL EXPENDITURES, 1984-85 (Instructions – Page v)

Current expenditures:	$000
1. Total estimated personnel costs	
2. Other costs (e.g. computing services, materials and supplies, rentals)	
3. Sub-total, current expenditures	
Capital expenditures:	
4. Land and buildings	
5. Machinery and equipment	
6. Sub-total, capital expenditures	
7. TOTAL INTRAMURAL EXPENDITURES	

[1] Equal to Question 1: column 1, row 13

Province _____

Ministry/Department _____

5. OBJECTIVES OF EXPENDITURES ON SCIENTIFIC ACTIVITIES, 1984-85 (Instructions – Page v)

Objective	Intramural		Extramural		Total 1984-85
	R&D	Related scientific activities	R&D	Related scientific activities	
	$000				
1. Advancement of Science					
2. Communications					
Energy & fuels:					
3. Conservation					
4. Fossil fuels					
5. Hydro electric energy					
6. Renewable resources					
7. Other (specify) _____					
Environmental issues:					
8. Air					
9. Land					
10. Water					
11. Other (specify) _____					
12. Health					
Industrial & economic development:					
13. Agriculture					
14. Fisheries					
15. Forestry					
16. Manufacturing					
17. Minerals					
18. Other (specify) _____					
Social development:					
19. Culture, sport & recreation					
20. Education					
21. Human resources					
22. Urban & regional studies					
23. Other (specify) _____					
24. Transportation					
25. Other (specify) _____					
26. TOTAL	[1]	[2]	[3]	[4]	

[1] Equal to Question 1: column 1, rows 5 and 6
[2] Equal to Question 1: column 1, rows 7, 8, 9, 10, 11 and 12
[3] Equal to Question 1: columns 2, 3, 4, 5 and 6, row 5
[4] Equal to Question 1: columns 2, 3, 4, 5 and 6, rows 7, 8, 9, 10 and 11

Province _____

Ministry/Department _____

6. PERFORMERS OF SCIENTIFIC ACTIVITIES, 1985-86 ESTIMATES (Instructions – Page iii)

Scientific activity	Intramural activities	Payments to: Industry	Universities	Hospitals & health organizations	Provincial research organizations	Other	Total 1985-86
	$000						
Research and experimental development (R&D):							
Current expenditures:							
1. In-house R&D							
2. R&D contracts							
3. R&D grants and contributions							
4. Research fellowships							
5. **Sub-total** (1 + 2 + 3 + 4)							
6. Capital expenditures							
Related scientific activities (RSA):							
Current expenditures:							
7. Education support							
8. Technical surveys							
9. Information services							
10. Special services and studies							
11. Museum services							
12. Capital expenditures							
13. **TOTAL EXPENDITURES**							

7. DEPARTMENTAL PERSONNEL ENGAGED IN SCIENTIFIC ACTIVITIES, 1985-86 ESTIMATES (Instructions – Page iv)

Type of personnel	R&D	Related scientific activities	Total 1985-86
	Person-years		
1. Scientific and professional			
2. Technical			
3. Other			
4. **TOTAL PERSONNEL**			

Province _____

Ministry/Department _____

8. OBJECTIVES OF EXPENDITURES ON SCIENTIFIC ACTIVITIES, 1985-86 ESTIMATES (Instructions – Page v)

Objective	Intramural		Extramural		Total 1985-86
	R&D	Related scientific activities	R&D	Related scientific activities	
	$000				
1. Advancement of Science					
2. Communications					
Energy & fuels:					
3. Conservation					
4. Fossil fuels					
5. Hydro electric energy					
6. Renewable resources					
7. Other (specify) _____					
Environmental issues:					
8. Air					
9. Land					
10. Water					
11. Other (specify) _____					
12. Health					
Industrial & economic development:					
13. Agriculture					
14. Fisheries					
15. Forestry					
16. Manufacturing					
17. Minerals					
18. Other (specify) _____					
Social development:					
19. Culture, sport & recreation					
20. Education					
21. Human resources					
22. Urban & regional studies					
23. Other (specify) _____					
24. Transportation					
25. Other (specify) _____					
26. TOTAL	[1]	[2]	[3]	[4]	

[1] Equal to Question 6: column 1, rows 5 and 6
[2] Equal to Question 6: column 1, rows 7, 8, 9, 10, 11 and 12
[3] Equal to Question 6: columns 2, 3, 4, 5 and 6, row 5
[4] Equal to Question 6: columns 2, 3, 4, 5 and 6, rows 7, 8, 9, 10 and 11

5-4600-120.1

PROVINCIAL GOVERNMENT ACTIVITIES
IN THE
SOCIAL SCIENCES AND HUMANITIES

QUESTIONNAIRE AND GUIDE

FISCAL YEAR 1984-85

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Ministry/Department or Agency		Reporting Unit	
Coordinator	Mailing Address		Telephone No.
Enquiries to be directed to		Telephone No.	Date

5-4600-121.1: 18-1-85 TBCT - REG. B101536

INTRODUCTION

This questionnaire covers activities in the social sciences and humanities funded by the provincial government. It includes expenditure and personnel data for research and development (R&D) and related scientific activities. All departments and agencies known to be conducting or funding activities in the social sciences are included.

The classifications used in this questionnaire will not necessarily correspond to existing accounting systems or organizational units. Accurate data, therefore, depend on the good will and intelligent judgement of the responding officers. Information is required which describes the characteristics and magnitude of the department's scientific activities; it is not a matter of decimal precision of data.

The data collected provide useful information for the development and analysis of provincial science policy. These statistics are also included with data collected from other sectors to provide national aggregates published by Statistics Canada. Data are released only with the approval of the provincial government.

This questionnaire includes only scientific activities in the social sciences and humanities.

The social sciences and humanities include such disciplines as:

Anthropology
Business administration and commerce
Communications
Criminology
Demography
Economics
Geography
History
Languages, literature and linguistics
Law
Library science
Philosophy
Political science
Psychology
Religious studies
Social work
Sociology
Urban and regional studies

If departmental scientific activities involve these disciplines, complete this questionnaire.

Natural sciences and technology include the following disciplines:

Life sciences - medical and biological
Physical sciences - chemistry, physics and astronomy
Environmental sciences - geology, oceanography and the study of the atmosphere
Engineering sciences - architecture, civil engineering, etc.
Mathematical sciences

If departmental scientific activities involve these disciplines, complete the separate questionnaire on the natural sciences and technology.

In many instances, particularly in health fields, it will be difficult to distinguish between the social and natural sciences. In such instances, however, some allocation must be made. Respondents should consider the main orientation of the projects involved and the field of training of the personnel in determining this allocation. Any measure which reflects the actual situation is acceptable.

Scientific Activities

The activities which concern us are those scientific and technological (S&T) activities which involve the generation, dissemination and initial application of new scientific and technological knowledge. The central activity is research and experimental development (R&D). In addition, there are a number of activities closely related to R&D. Included in this survey are: education support, statistical surveys, information services, special services and studies, and museum services.

Research and Experimental Development

Research and experimental development (R&D) is defined as creative work undertaken on a systematic basis towards the acquisition of new knowledge about man, his actions and his institutions, and the application of this knowledge in new ways.

Both "research" and "development" are often used with different meanings in the government. For example, it is increasingly common to hear that someone is researching something, i.e., the person is looking for information about something.

Similarly, there are many units with either research or development or both terms in their titles which are concerned primarily with information gathering, speech writing, preparation of position papers or departmental organization.

R&D requires the acquisition of knowledge and not just information. New knowledge involves the integration of newly acquired information into existing hypotheses, the formulation and testing of new hypotheses or the reevaluation of existing observations.

An R&D project generally has three characteristics:

- a substantial element of uncertainty, novelty and innovation;
- a well-defined project design;
- a report on the procedures and results of the project.

"Many social scientists perform work in which they bring the established methodologies and facts of the social sciences to bear upon a particular problem, but which cannot be classified as research. The following are examples of work which might come in this category and are *not* R&D: interpretative commentary on the probable economic effects of a change in the tax structure, using existing economic data; forecasting future changes in the pattern of the demand for social services within a given area arising from an altered demographic structure; operations research as a contribution to decision-making, e.g. planning the optimal distribution system for a factory; the use of standard techniques in applied psychology to select and classify industrial and military personnel, students, etc., and to test children with reading or other disabilities."
(Frascati Manual)

Related Scientific Activities

Education support – grants to individuals or institutions which are intended to support the post secondary education of students in the social sciences and humanities. General operating or capital grants are excluded. Grants intended primarily to support the research of individuals at universities are either R&D grants or research fellowships.

Statistical surveys – the collecting, processing and disseminating of statistics on man, his economic and social activities. Included are the development of technical methodology and statistical analysis.

The institutions involved are the statistical bureaux of provincial governments and the statistical sections of departments and agencies. If there are units whose principal activity is R&D, their costs and personnel should be assigned to R&D; specialized libraries with separate budgets should be assigned to Information services.

Information services – all work directed to recording, classifying, translating, and disseminating information resulting from R&D in the social sciences or required in support of such R&D. Included are the operations of specialized libraries and archives, the publication of scholarly journals and bibliographies, and the organizing of scientific conferences. Grants for the publication of scholarly works are also included.

General purpose information services or information services directed primarily toward the general public are excluded, as are general departmental and public libraries. When individual budgets exist, the costs of libraries which belong to institutions otherwise entirely classified to another activity, such as R&D or Statistical surveys, would be assigned to Information services. The costs of printing and distributing reports from activities such as Statistical surveys or R&D are attributable to those activities.

Special services and studies – systematic investigations carried out in order to provide information needed for planning or policy formulation. Demonstration projects are also included.

The work is usually carried out by specialized units in some government departments, by consultants, by royal commissions, and by task forces. The activity is similar to R&D since it may require innovative analyses and a high degree of scientific ability. However, such studies are not intended to acquire new knowledge but to provide specific answers to specific problems (generally immediate, localized and perhaps temporary). The day-to-day operations of units concerned with departmental planning, organization or management are not normally included but special projects may be relevant.

Examples of special studies would be a study of the viability of a petrochemical complex in a certain region of Canada, the Royal Commission on Poverty, the MacKenzie Valley Pipeline Inquiry, the Science Council's special studies, and the Manitoba Guaranteed Income Experiment (net costs).

Museum services – the collecting, cataloguing, and displaying of specimens and representations relating to the history, social organization, and creations of man.

The activity represents a systematic attempt to preserve and display the works of man and to provide information on his works, history, and nature. The scientific activities of historical museums, archaeological displays, and art galleries are included. In all cases, the costs of providing entertainment and recreation to visitors should be excluded (e.g. restaurants, children's gardens, and nurseries).

If practical, resources of such institutions devoted to other activities, such as R&D or Information services, should be excluded from Museum services and assigned to those activities.

When a museum also covers aspects of natural history, the museum's operations should be divided between the social and natural sciences. However, museums of science and technology, war, etc., which display man-made objects and may also illustrate the operations of certain technologies, should be considered as Museum services in the social sciences and humanities.

A. UNITS OF DEPARTMENT WHICH CARRIED OUT SCIENTIFIC ACTIVITIES (p. vii)

List those units (section/division/branch/station/group) of the department which carry out scientific activities and check the appropriate activities. If most of the units of a larger organization are engaged in the same activity, only the larger unit need be identified.

The list should help you to ensure that all the activities of the department are considered and that smaller units are not overlooked. It will also assist the data users to better understand the nature of the various scientific activities performed and could serve as a starting point for users requiring more information on some aspect of the department's activities.

B. MAJOR PAYMENTS FOR SCIENTIFIC ACTIVITIES (p. viii)

Enter the name and city of each recipient of a major payment (≥$25,000) and enter the payment in the appropriate activity column. Both grants and contracts are included.

The information provided here will assist you to complete Question 1, the "key" question in the survey. It will also be used by Statistics Canada to ensure that major external performers of scientific activities are included in surveys of the other sectors.

Replies to this question will be treated as confidential by both Statistics Canada and the provincial government.

1. PERFORMERS OF SCIENTIFIC ACTIVITIES (p. 1 and 4)

Performers

Intramural – the reporting department. The scientific work is normally carried out by personnel assigned to the department and usually in facilities of the department. Also included are the administration of extramural programs, the costs of acquiring land, buildings and equipment to be used in scientific activities, and contracts to provide services required for scientific projects (e.g. rental of aircraft, computer services).

Industry – Canadian business and government enterprises. Include public utilities and government-owned firms as well as non-profit institutions and associations mainly serving industry and not controlled by another institution (e.g. Pulp & Paper Research Institute). Consultants providing scientific and engineering services are also included. Industrial research institutes affiliated with a university belong in the Universities sector.

Universities – Canadian universities and affiliated institutes owned, administered or staffed by them (e.g. Atlantic Industrial Research Institute of Nova Scotia Technical College). Teaching facilities in non-university hospitals are included.

Hospitals and health organizations – Canadian hospitals and health organizations which are not part of university medical schools.

Provincial research organizations - The Nova Scotia Research Council, the New Brunswick Research and Productivity Council, le Centre de recherche industrielle du Québec, the Ontario Research Foundation, the Manitoba Research Council, the Saskatchewan Research Council, the Alberta Research Council, and the Research Council of British Columbia.

Other – the federal government, other provincial government departments, municipal governments, individuals and institutions not identified with any other sector, and foreign performers.

Activities – The activities of R&D, education support, statistical surveys, information services, special services and studies, and museum services have been defined above. These activities are further classified by type of expenditure.

Current expenditures – expenditures on items such as personnel, transportation and communications, information, professional and special services, rentals, purchased repair and upkeep, utilities, materials and supplies. Current expenditures for R&D are divided as follows:

> **In-house R&D** – R&D performed by personnel of the reporting department. It may include R&D carried out on behalf of another department and covered by a transfer of funds, as well as services provided by other organizations (e.g. computing, transportation).

R&D contracts – payments to other organizations to carry out R&D intended to directly benefit the reporting department. The administration of R&D contracts is an intramural cost.

R&D grants and contributions – payments to other organizations (or individuals) for R&D intended basically to benefit the recipient of the grant. Contributions and loans should be considered as grants. The administration of R&D grants and contributions is an intramural cost.

Research fellowships – payments to individuals for advanced research training and experience. The aim of the program should be research training rather than education.

Capital expenditures – expenditures on the construction and acquisition of land, buildings, machinery, and equipment.

2. SOURCES OF FUNDS FOR SCIENTIFIC ACTIVITIES (p. 1)

This question identifies the sources of funds for the total expenditures on scientific activities reported in Question 1. It will help to ensure that work funded from outside the department is not overlooked.

From departmental budget – that portion of the total departmental budget which was spent on social science activities.

From other departments – money transferred from another provincial department to this one for activities in the social sciences. Include when applicable, provincial portions of any federal-provincial cost sharing programs and identify the program.

From the Federal government – all funds from the federal government used for social science activities. The funds are referred to as payments, contributions, transfers, etc. Also include federal portions of any federal-provincial cost sharing programs and identify the program.

From trust funds – all funds from trust funds used for social science activities.

From other sources – all funds for social science activities from sources not specified above such as reserve funds, revenues from sales or fees.

3. DEPARTMENTAL PERSONNEL ENGAGED IN SCIENTIFIC ACTIVITIES (p. 2 and 4)

The categories used to classify personnel will generally correspond to those used by the provincial government. The definitions given below indicate the training and educational level generally required for such categories. In all cases, however, consider the job classification, not the person's qualifications, because there will be some employees who exceed the qualifications required by the job (e.g. a person with a degree in a technical or clerical position).

Scientific and professional – people in jobs that require at least one academic degree or nationally recognized professional qualification (e.g. chartered accountant - C.A.) as well as those with equivalent experience.

Technical – people in jobs that require specialized vocational or technical training beyond the secondary level (e.g. community colleges and technical institutes) as well as those with experience equivalent to this training.

Other – clerical, secretarial, administrative, operational and other support personnel.

Data are requested by activity and category of employment in person-years or full-time equivalent. Persons engaged only in a scientific activity are considered one person-year. Those working only part-time on scientific activities are considered as a fraction corresponding to their involvement. Include both permanent and non-permanent employees.

Care should be taken to ensure that the personnel data reported are consistent with the expenditure data. This is the most common reason for questioning the validity of a return. It is suggested that respondents check this by dividing the reported total person-years into the intramural personnel costs reported in Question 4 to determine if the cost per person is a reasonable figure.

4. DETAIL OF INTRAMURAL EXPENDITURES (p. 3)

These data are useful for inter-departmental comparisons, for construction of constant dollar expenditures series, and for editing the question on personnel.

Some work is considered intramural although it is actually performed outside the department. This is because the performer supplies a service or good, the provision of which it would not consider a scientific activity. Examples are computing services purchased from another government department or the private sector, materials and supplies for the department's scientific activities, rental of accommodation or transportation. All non-capital expenditures of this nature are to be considered "other costs", even if the personnel costs portion of such purchases are known. "Personnel costs" are to be used only for the departmental personnel reported in the previous question.

5. OBJECTIVES OF EXPENDITURES ON SCIENTIFIC ACTIVITIES (p. 3 and 5)

The objectives listed are not mutually exclusive, nor do they represent the total range of possible objectives. They are, however, intended to cover the major areas of current economic, political and technological interest. This list is common to both the social and natural sciences.

Report expenditures under the objective which is primary to that expenditure. Generally, the objective selected should be consistent with the stated objectives of the reporting department.

Advancement of science – activities for the development of general scientific knowledge (e.g. general R&D grants to universities or support of fields such as astronomy and archaeology).

Communications – activities in support of the development and regulation of communication services, including telecommunications.

Energy and fuels:

Conservation – activities directed towards the conservation of energy (e.g. domestic and commercial buildings, vehicles and other transportation systems, industrial processes, etc.).

Fossil fuels – activities concerned with the exploration, extraction, refining and use of crude oils, natural gas and coal.

Hydro electric energy – activities directed towards the generation and use of hydro electric power.

Renewable resources – activities directed towards the exploration or use of solar, biomass, hydraulic, geothermal or peat energy.

Other (specify) – any other activities not covered by those listed above.

Environmental issues – activities aimed at preserving or restoring environmental quality, including scientific work on pollution but excluding medical aspects. For example, R&D on diseases caused by pollution should be reported under the health objective. Those activities dealing with air, land and water should be reported separately.

Health – activities related to the maintenance and improvement of the physical well-being of the population.

Industrial and economic development:

Agriculture – activities which support the agricultural industry.

Fisheries – activities which support the fishing industry.

Forestry – activities which support the forestry industry.

Manufacturing – measures intended to achieve efficient and sustained growth in manufacturing industries, and the encouragement of the production of new goods and services.

Minerals – activities related to the location, extraction, processing, use and conservation of mineral resources (except fuels).

Other (specify) – any objectives not covered by those listed above.

Social development:

Culture, sport and recreation – activities related to the support and development of culture, physical fitness, sport and recreation. Include wilderness recreation and conservation of fauna and flora.

Education – education support, grants for education research, activities in support of education policy.

Human resources – activities directed towards the development and utilization of the labour force. Labour relations, personnel policy and training programs, demographic and immigration studies are included.

Urban and regional studies – studies directed towards understanding communities and improving life within the urban and rural community.

Other (specify) – other activities directed towards social well-being (e.g. administration of justice consumer protection).

Transportation – activities in support of the development and regulation of transportation services.

Other (specify) – any objectives not covered by those listed above.

Province _____

Ministry/Department _____

A. UNITS OF DEPARTMENT WHICH CARRIED OUT SCIENTIFIC ACTIVITIES, 1984-85 (Instructions – Page iii)

Unit	Research and experimental development	Related scientific activities
	(√)	

DESCRIPTION OF INTRAMURAL ACTIVITIES

Briefly describe the intramural scientific activities of the reporting department. Describe major current projects rather than overall programs. Attach any relevant material (papers, annual reports, etc.) which provide description of departmental activities.

Province _____

Ministry/Department _____

B. MAJOR PAYMENTS FOR SCIENTIFIC ACTIVITIES, 1984-85 (Instructions – Page iii)

Recipient	Research and experimental development	Related scientific activities
	$000	

DESCRIPTION OF EXTRAMURAL ACTIVITIES

Briefly describe extramural projects, or programs, and identify the sectors in which they are conducted. If descriptive material or lists of projects are available they may be submitted in lieu of completing this question.

Province _____

Ministry/Department _____

1. PERFORMERS OF SCIENTIFIC ACTIVITIES, 1984-85 (Instructions – Page iii)

Scientific activity	Intramural activities	Payments to: Industry	Universities	Hospitals & health organizations	Provincial research organizations	Other	Total 1984-85
	$000						
Research and experimental development (R&D):							
Current expenditures:							
1. In-house R&D							
2. R&D contracts							
3. R&D grants and contributions							
4. Research fellowships							
5. Sub-total (1 + 2 + 3 + 4)							
6. Capital expenditures							
Related scientific activities (RSA):							
7. Current expenditures							
8. Capital expenditures							
9. TOTAL EXPENDITURES							

2. SOURCES OF FUNDS FOR SCIENTIFIC ACTIVITIES, 1984-85 (Instructions – Page iv)

	$000
1. From departmental budget	
2. From other departments	
3. From federal government (specify source)	
4. From trust funds	
5. From other sources (reserve funds, revenues from sales or fees)	
6. TOTAL EXPENDITURES	

Province _____

Ministry/Department _____

3. DEPARTMENTAL PERSONNEL ENGAGED IN SCIENTIFIC ACTIVITIES, 1984-85 (Instructions – Page iv)

Type of personnel	R&D	Related scientific activities	Total 1984-85
	Person-years		
1. Scientific and professional			
2. Technical			
3. Other			
4. TOTAL PERSONNEL			

4. DETAIL OF INTRAMURAL EXPENDITURES, 1984-85 (Instructions – Page iv)

	$000
Current expenditures:	
1. Total estimated personnel costs	
2. Other costs (e.g. computing services, materials and supplies, rentals)	
3. Sub-total, current expenditures	
Capital expenditures:	
4. Land and buildings	
5. Machinery and equipment	
6. Sub-total, capital expenditures	
7. TOTAL INTRAMURAL EXPENDITURES	[1]

[1] Equal to Question 1: column 1, row 9

Province _____

Ministry/Department _____

5. OBJECTIVES OF EXPENDITURES ON SCIENTIFIC ACTIVITIES, 1984-85 (Instructions – Page v)

Objective	Intramural		Extramural		Total 1984-85
	R&D	Related scientific activities	R&D	Related scientific activities	
	$000				
1. Advancement of Science					
2. Communications					
Energy & fuels:					
3. Conservation					
4. Fossil fuels					
5. Hydro electric energy					
6. Renewable resources					
7. Other (specify) _____					
Environmental issues:					
8. Air					
9. Land					
10. Water					
11. Other (specify) _____					
12. Health					
Industrial & economic development:					
13. Agriculture					
14. Fisheries					
15. Forestry					
16. Manufacturing					
17. Minerals					
18. Other (specify) _____					
Social development:					
19. Culture, sport & recreation					
20. Education					
21. Human resources					
22. Urban & regional studies					
23. Other (specify) _____					
24. Transportation					
25. Other (specify) _____					
26. TOTAL	[1]	[2]	[3]	[4]	

[1] Equal to Question 1: column 1, rows 5 and 6
[2] Equal to Question 1: column 1, rows 7 and 8
[3] Equal to Question 1: columns 2, 3, 4, 5 and 6, row 5
[4] Equal to Question 1: columns 2, 3, 4, 5 and 6, row 7

Province _____

Ministry/Department _____

6. PERFORMERS OF SCIENTIFIC ACTIVITIES, 1985-86 ESTIMATES (Instructions – Page iii)

Scientific activity	Intramural activities	Payments to: Industry	Universities	Hospitals & health organizations	Provincial research organizations	Other	Total 1985-86
	$000						
Research and experimental development (R&D):							
Current expenditures:							
1. In-house R&D							
2. R&D contracts							
3. R&D grants and contributions							
4. Research fellowships							
5. Sub-total (1 + 2 + 3 + 4)							
6. Capital expenditures							
Related scientific activities (RSA):							
7. Current expenditures							
8. Capital expenditures							
9. **TOTAL EXPENDITURES**							

7. DEPARTMENTAL PERSONNEL ENGAGED IN SCIENTIFIC ACTIVITIES, 1985-86 ESTIMATES (Instructions – Page iv)

Type of personnel	R&D	Related scientific activities	Total 1985-86
	Person-years		
1. Scientific and professional			
2. Technical			
3. Other			
4. **TOTAL PERSONNEL**			

Province _____

Ministry/Department _____

8. OBJECTIVES OF EXPENDITURES ON SCIENTIFIC ACTIVITIES, 1985-86 ESTIMATES (Instructions – Page v)

Objective	Intramural		Extramural		Total 1985-86
	R&D	Related scientific activities	R&D	Related scientific activities	
	$000				
1. Advancement of Science					
2. Communications					
Energy & fuels:					
3. Conservation					
4. Fossil fuels					
5. Hydro electric energy					
6. Renewable resources					
7. Other (specify) _____					
Environmental issues:					
8. Air					
9. Land					
10. Water					
11. Other (specify) _____					
12. Health					
Industrial & economic development:					
13. Agriculture					
14. Fisheries					
15. Forestry					
16. Manufacturing					
17. Minerals					
18. Other (specify) _____					
Social development:					
19. Culture, sport & recreation					
20. Education					
21. Human resources					
22. Urban & regional studies					
23. Other (specify) _____					
24. Transportation					
25. Other (specify) _____					
26. TOTAL	[1]	[2]	[3]	[4]	

[1] Equal to Question 6: column 1, rows 5 and 6
[2] Equal to Question 6: column 1, rows 7 and 8
[3] Equal to Question 6: columns 2, 3, 4, 5 and 6, row 5
[4] Equal to Question 6: columns 2, 3, 4, 5 and 6, row 7